

Medical Lib

CLINICAL MEDICINE and SURGERY

March, 1928

Vol. 35, No. 3

LEADING ARTICLES

Carbon Arc and Flame Lamp Therapy

By Herman Goodman, B.S., M.D., New York City

The Value of a Colostomy

By Charles J. Drueck, M.D., F.A.C.S., Chicago

Nickel Sulphate as a Test for Alkalis

(A Useful Reagent in Urine Analysis)

By Clifford Mitchell, M.D., Chicago

The Etiology and Treatment of Gastric and Duodenal Ulcer

(The Use of Cholesterin and Bile Salts)

By E. Rosenberg, M.D., Cleveland, Ohio

Congress on Medical Education and Hospitals

Reported by George B. Lake, M.D., Chicago

The Therapeutic Use of Fresh Orchic Emulsion

(A Preliminary Report)

By A. M. Bennardi, M.D., Cleveland, Ohio

Acne Vulgaris

By J. Lewis Webb, M.D., Chicago

Iodine in the Treatment of Goiter

(A Survey of Medical and Surgical Opinion)

By James Hutton, M.D., Chicago

Editorials

Legendary Gods and Heroes of Medicine

Causes of Death in 1708

The Ubiquitous and Mysterious "Cold"

Medical Liberty League

Biologic Contraception

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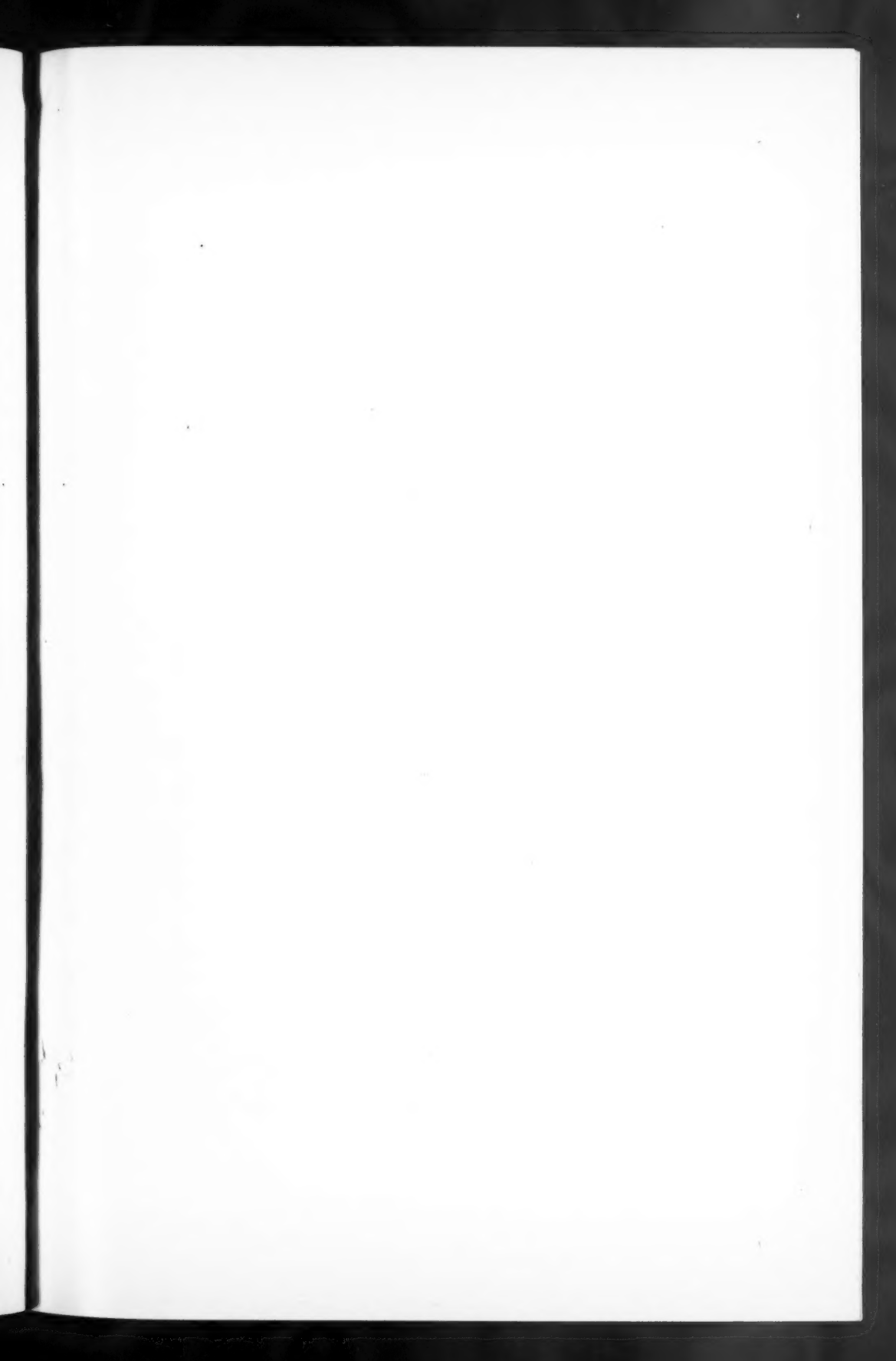
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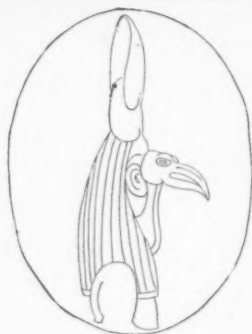
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EA, LORD OF THE DEEP.



THOTH.



DHANWANTARI



SHENG NUNG.

Clinical Medicine and Surgery

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Legendary Gods and Heroes of Medicine

SO far as one is able to judge, the history of medicine is as old as the history of man. Even the lower animals seem to have an instinctive idea of what to do when they are ill or injured, and it cannot have been long after our ancient progenitors began to walk on their hind legs before they began to make crude efforts to relieve the pains which resulted from errors of diet and from exposure, and to minimize, in some manner, the effects of the terrible contusions, lacerations and fractures which must have resulted from their conflicts with ferocious beasts and from naked contact with the inexplicable and, to them, terrible forces of nature.

When myth and tradition began to convey the basic truths—though, as a rule, not the actual details—of life from one generation to another, we begin to find mention of gods of health and of healing, and, a little later, of great healers and teachers. In that remarkable and fascinating book, "The Egyptian Princess", by George Ebers, the Egyptologist, we find mention of an oculist, Nebencari, attached to the court of the Pharaoh, many centuries before Christ.

Among the earliest of the traditional stories, dating back to 5,000 B.C., we encounter EA, the Lord of the Deep—creator and protector of mankind and instructor

in all the arts and sciences, including the science and art of healing. He is said to have arisen out of the sea, and is represented as a man with the head of a fish—or, sometimes, as a fish with the head of a man.

The Babylonians knew EA as the god of the ocean, and considered his son, Marduk, as the god of healing.

Always the great healers seem to have been connected with scholarly pursuits of all sorts, and also, frequently, with religion and priestcraft, so it is not surprising to find the Egyptians, in 3,500 B.C., worshipping THOTH as the God of writing and of libraries, the inventor of the arts and sciences, and the presiding diety and personal instructor of the physicians of that early age. He was also supposed to be the keeper of the record of the actions of the dead.

THOTH corresponded to the Greek *Hermes Trismegistus* and the Roman *Mercury*—from whom we get the caduceus, which is so closely associated with Medicine and physicians—and was represented as a man with the head of an ibis. *I-em-Hetep*, who is believed to have established hospitals in Memphis and in Upper Egypt, is reputed to have been the son of THOTH.

In the early Hindu mythology, the tra-

ditions of which were handed down, by word of mouth, from about 5,000 B.C. to 1,500 A.D., we find stories of DHANWANTARI, the presiding genius of Medicine and the instructor of physicians. In teaching them the healing art he is said also to have revealed to them the great truths of the Vedas—the sacred scriptures of early India.

In China, two great heroes of medicine vie with each other for first place, but there seems reason to believe that SHENG NUNG lived about 150 years earlier than did Wong Tai, who disputes his priority—about 2,850 B.C.—though both have been called “The Father of Chinese Medicine”.

SHENG NUNG discovered and applied the medicinal properties of plants in the treatment of disease. It is quite probable that he was familiar with the healing virtues of *ma huang*!

We should not forget that the teachings of Moses, as recorded in the Old Testament, show that he must have been a sanitarian of no mean ability and perspicacity.

Thus we find the roots and beginnings of our great profession among the earliest stories and traditions of the human race, and always we find the physicians looked up to and even worshipped as the custodians of knowledge, wisdom and power.

May those ancient virtues and attributes grow and work in us, now and always.

Persons die; principles live.—Annie Besant.

THE UBIQUITOUS AND MYSTERIOUS “COLD”

What are we trying to do, as physicians—simply to cure disease, or to raise the general standard of health from the mere ability to get about and do a reasonable day's work to the point where just to be alive is an abounding joy?

Both are worthy objects of endeavor, but we believe that the latter will prove to be the Medicine of tomorrow.

We are living longer than people lived a score of years ago, so the diseases of middle and old age assume greater relative importance. Mr. and Mrs. Albert D. Lasker have recently given a million dollars to the University of Chicago for research into the causes and prophylaxis of the diseases of the later years. That ought to help toward the realization of the dreams of Dr. E. Lyman Fiske, who says we should all

live to the century mark, and of Professor Serge Voronoff, who gives 140 years as the reasonable span of human existence.

“Colds” do not kill us (though, for aught we know, their direct effects may do so), but they do cause more discomfort and inefficiency than that resulting from a number of the more serious diseases put together; and they are the most universal perverters of that abounding health for which we strive.

Almost everybody has at least one cold a year, and if only one day is lost from work that means 110 million days lost in this country every year—300,000 lost years! At an average salary of \$1,000, that involves a total money loss of \$300,000,000! The loss of joy, efficiency and general enthusiasm is incommensurable in dollars and cents.

If “colds” were deadly, like cancer, tuberculosis, Bright's disease and a number of others, the research workers would have grappled with them years ago, and we would now know more about them than we do.

What is a “cold” anyway? Nobody knows! It looks, rather, as if we were giving a loose, generic, symptomatic name to a fairly varied group of disease states, due to equally various causes.

The popular impression is that “colds” are due to bacterial infection and are contagious; but Dochez and others who are working on the problem have, so far, been unable to isolate any specific microorganism. Still, they do often yield to irrigations of metaphen and other antiseptics and to leukocyte stimulation by means of vaccines and lactigen.

Cheney says that they are metabolic disorders, due to dietary indiscretions, loss of sleep and the like, and backs up his opinions by curing many cases by means of fasting, elimination and alkalization. Recent experiments show that a diet deficient in vitamins increases the susceptibility to tuberculosis in white rats. Perhaps such a diet makes us prone to contract “colds”.

Both of these ideas may be correct, at least in part. Then there are the frequently encountered cases of recurrent “colds” which are undoubtedly exacerbations of chronic infections of the nasal sinuses.

The whole subject is chaos! What part does actual cold play in these conditions? What is the etiologic importance of bac-

teria, fatigue, diet, constipation, exposure, dust and fumes, allergy, endocrine disturbances, anatomic deformities and various other factors?

It looks, now, as though we were to have a real study of the whole problem, on a large scale, for the Chemical Foundation, through its president, Mr. Francis Garvan, has just donated \$195,000 to Johns Hopkins University, to be known as the "John J. Abel Fund for Research on the Common Cold", in honor of that veteran pharmacologist and biologic chemist who has given us epinephrin and synthetic insulin.

This is a real beginning of a systematic and coordinated attack upon one of the largest problems that now confront the medical profession. It is, of course, only a beginning, for the vastness of the undertaking is appreciated only by those who have given the matter long and serious consideration. As results appear, or even from the start, general interest should be aroused, and the fund will probably be augmented from a number of sources.

Once more the Chemical Foundation has conferred a great benefit upon Medical Science; and if this gift leads to the discovery of a method or methods for minimizing the incidence of "colds", the whole world will be the debtor of the far-sighted men who control the destinies of that great institution.

If anything seems exceedingly difficult to you, do not conclude that it is beyond human power. Think, rather, that whatever is possible to man, and right for him to do, is within your reach.—Marcus Aurelius.

CAUSES OF DEATH IN 1708

A good friend who knows our joy in that sort of thing recently sent us a photograph of an old document entitled, "A General Bill of all the Christenings and Burials, from the 16th of December, 1707, to the 14th of December, 1708, According to the Report made to the Queen's Most Excellent Majesty: By the Company of Parish-Clerks of London."

Here are many interesting things. The christenings during that year were only 15,862 (perhaps there were a good many infants who did not live to be christened—539 stillbirths are recorded—and it is not unlikely that many more for one reason or another did not receive the ministrations of the church), while the burials numbered 21,291. The male christenings were 8,239

and females 7,623. Deaths in the two sexes were almost equal: males 10,604, and females 10,687.

The list of the causes of death proves most attractive to the modern physician. Diagnoses were, obviously, not made very closely, as is evidenced by the fact that 5,902 deaths are reported from "Convulsion," which, no doubt, included all sorts of conditions accompanied by muscular spasms of any variety.

"Consumption" claimed the second largest list of victims, with 2,796. If, to this number, be added the deaths from "Cough" (3), "Hectick-Fever" (1) and "Tissick" (324), which sound as if they might be tuberculous, we have 3,124.

Then followed "Fever," with 2,738 deaths (probably a conglomeration of many conditions having an elevation of temperature as a symptom; but not all, for "Childbed" is credited with 247 deaths, "Calenture" with 1, "Measles" with 126, "Pleurisie" with 47, "Rheumatism" with 28 and "Scarlet-Fever" with only 1); "Aged" (including, no doubt, a wide variety of maladies) with 1,728; "Small-Pox" with 1,687 (this, remember, was before the time of Jenner and vaccination); and "Teeth" (apparently covering most of the gastrointestinal disorders of early childhood) with 1,282. "Cancer" is charged with only 77 deaths, though "Canker" (10), "Sores and Ulcers" (36) and "Stoppage of the Stomach" (272) may have belonged in this category.

Some of the diagnoses sound particularly ludicrous. "Gripping in the Guts" killed 768, "Twisting of the Guts," 8, and "Plague in the Guts," 1. The deaths of 57 "Chrisoms" (children dying within a month of baptism) are recorded. "Chin Cough," "Distracted," "Evil," "French-Pox," "Grief," "Imposthume" (abscesses), "Livergrown," "Looseness," "Purples," "Rising of the Lights" (72 deaths), "Stoppage of the Stomach," "Stronggullion" (whatever that may be), "Suddenly," "Suffocation of the Blood," "Surfeit" (36 deaths), "Vapours," "Water in the Head" and "Wind" are among the other remarkable causes of mortality.

The "Casualties" include: "Died by Misfortune," "Frighted," "Overlaid" and "Planet-struck."

Those who get a good laugh out of this and have a desire for more can do very well by looking over the death certificates

of a few years back, at the court-house of some rural county. Even those filed last year might not be wholly devoid of amusing entries; nor are the causes of death recorded in the cities by any means absolutely scientific and illuminating.

A large part of the medical profession needs to make more definite and proveable diagnoses and record them in more logical and scientific terms. We can imagine a medical editor in 2148 turning over some of the county records of this year and bursting into uncontrollable mirth. Even some of the diagnoses which we now consider entirely rational and proper may look very strange 220 years from now.

It will do us good and save us from bumpiousness if we think of things like that now and then. Science is moving forward faster than ever before and, in spite of those who feel that we are now at the crest and apex of civilization and knowledge, there may still be one or two things for humanity to learn and several faculties for it to develop.

Let us keep or develop a sense of humor and not take ourselves or the people and things about us too seriously. There *may* be people, two centuries hence, who will know more than we do.

The real secret of getting the most happiness and contentment out of life is in making steady progress. It matters little how fast it is, so long as every year is a little ahead of the year before.—*Income*.

MEDICAL LIBERTY LEAGUE

Again we are reminded of the fact that, while there is still a good deal of lack of cooperation among physicians, those who are openly attacking the medical profession are doing a considerable amount of organizing. There are the antivaccination and antivivisection organizations, which are very active with their propaganda, well meant, perhaps, but showing deplorable ignorance. And within the last few years a worthy successor to the discredited and defunct "League for Medical Freedom," has arisen in the form of "The American Medical Liberty League."

This organization, like most of its kind, was developed and is being managed by a few people who know exactly what they want and also know how to milk the soft-headed and sentimental suckers who are always ready to believe any loud-mouthed individual who will tell them that the mil-

lenium can begin at 2 o'clock on Tuesday if they will send in their \$2 (or \$5 or \$10) without delay and distribute the literature to be sent them.

The main backers and promoters of this scheme seem to be a group of unsavory patent medicine purveyors; the president is or has been the president of the Anti-vaccination League; the vice-president is or was an elderly gentleman who formerly advertised to teach, by mail (for a consideration!), a method whereby 80 percent of cases of cancer could be cured (!) The other officers and directors are people of the same kidney.

The mouthpiece of this delicious aggregation is *The Truth-Teller*, a scurrilous sheet, so misappropriately named as to be uproariously funny. This periodical is published at Battle Creek, Mich., apparently by "The Ensign Printing Co." with U. S. Ensign and D. W. Ensign as its editor and managing editor, respectively.

These Ensigns were the promoters of the "Ensign Remedies," a list of egregious humbugs, advertised to cure (by the number on the package) every human ill, from "Abdomen" and "Abortion" to "Wrinkles" and "Writer's Cramp," including (please note!) cataract, floating kidney, *bashfulness, stupidity* (too bad this remedy couldn't have worked on some of their dupes!), *disappointment in love and laziness*. The state officials of Michigan examined several of these nostrums and found that the preparations prescribed for appendicitis, pneumonia and hay-fever each consisted of 100 percent sugar.

The Truth-Teller (?) searches the dictionary for vitriolic language wherewith to anathematize the medical profession, and the garbage cans for stories to point the moral and adorn the tale. To persons of any intelligence or education their outpourings are simply laughable; but there is still a rather high percentage of ignorant and gullible souls, in most communities, who can be caught by such clap-trap.

Incidentally, this paper takes occasion to laud to the skies the merits of the osteopaths, naprapaths, disciples of Abrams, chiropractors and the other irregulars, especially the chiropractors.

We were curious to know whether the chiropractors had stooped so low as to countenance this sort of thing, and accordingly wrote to the president of the largest chiropractic school and the presidents of

the two leading chiropractic associations. But, while these people do not love the regular medical profession any more than the law allows, their official spokesmen hastened to deny any responsibility for or connection with this publication, which is actually doing them harm, in the eyes of all thinking persons.

This organization is not strictly a new thing, having been ably discussed in the *J.A.M.A.* for July 29, 1922, but they are now having the effrontery to send their literary manure-spreader to physicians (we received one), and it seems worth while to recall attention to their antecedents.

The moral of this smutty story is this:

These people, and others of the same sort, are very busy in spreading misinformation where it is liable to have the greatest possibilities for harm. Who, if not the informed physicians of the country, is to tell people the facts? If we maintain the dignified and scholastic taciturnity which has been considered appropriate in the past, can we blame those who are inclined to feel that our silence is more or less an admission that our vilificators are right?

If every physician in the country would resolve never, henceforth, to speak slightly of any of his professional brethren; and, furthermore, to let no week go by without instructing some person in the truth about the progress of medical science and preventive medicine, the time would not be long until the deluders and exploiters of the public would find themselves without material upon which to spend their misdirected energies.

It is better to wander in a mountain pass with the wild beasts than to live in the palace of the gods with a fool.—Sanskrit Proverb.

BIOLOGIC CONTRACEPTION

In that remarkable little book, "Dedalus"—which every thinking person ought to read for the sheer joy of the intellectual stimulation it brings—Haldane remarks that, in the whole evolution of the human race, while the number of mechanical inventions is legion, there have been but four *biologic* inventions. His thesis is that such discoveries are deeply resented by most people, because they seem to upset the foundations of what we have come to regard as decency, but that when they are accepted

they bring about fundamental and revolutionary changes in the life of the race.

It now appears that we may possibly be on the threshold of two of these epoch-making discoveries. The bacteriophage of d'Herelle, while its investigation is moving rather slowly, certainly offers possibilities in the way of a new line of attack upon the infectious diseases. The idea of setting an ultramicroscopic parasite to prey upon bacteria is certainly intriguing.

But if the findings of Dr. Papanicolaou, of New York, regarding the secretions of the ovary, are confirmed by other investigators, the results bid fair to require an active and vivid imagination for their estimation.

Briefly, Dr. Papanicolaou declares that there are two distinct hormones secreted by the ovary. The former—the ordinary female sex hormone—comes from the ovarian follicles and, when administered to animals, causes a rapid or excessive growth of the external and internal sex organs, with a speeding up of the estrual cycle and of ovulation.

The luteal hormone—from mature corpora lutea—slows the periodicity of ovulation or suspends it altogether, as during pregnancy. By injecting luteal extracts subcutaneously, at regular intervals, the doctor has been able to inhibit ovulation entirely for a period of several months, in animals like the guinea-pig, which normally ovulate every fifteen or sixteen days. When the injections were stopped, normal ovulation was resumed after a varying period of time.

Up to the present time, the methods of contraception in vogue have been either mechanical or chemical. None of them have been proved to be *absolutely* reliable; all of them depend for their success upon the possession by their users of a degree of intelligence and forethought which is above the average; and, worse, perhaps, than their other drawbacks, almost all of them introduce a disturbing and unesthetic element into the most intimate and beautiful relation in life, which results, with sensitive persons, in a weakening or loss of the libido, thus minimizing or destroying those higher and finer values which are the outcome and one of the chief purposes of a properly consummated sex embrace.

Even if there were no restrictions upon the dissemination of contraceptive information, it would be difficult to popularize such

measures among any class of people except that which is now using them. Those in the strata of society where breeding is most luxuriant and promiscuous lack the intelligence to carry out the technic of birth control, even if it were fully explained to them; and the people with strong emotions and little sense of social responsibility would, to a large extent, refuse to permit the protection of the public welfare to interfere in any degree with their momentary and personal enjoyment.

The result of this state of affairs is that, at the present time, contraception is practiced almost entirely by those individuals whose progeny would be of the highest value, to the country and to the world, and unknown or neglected by those whose numerous offspring we could best afford to spare. Nor, with our present knowledge of the subject, does there seem any prospect that these conditions will or can be radically modified.

With a biologic method of birth control available, such as that suggested by the discovery of the luteal hormone, the situation would be altered in a revolutionary manner. If a practically painless hypodermic injection, once or twice a month, would do away with the possibility of conception, without interfering with sex desire and ability, think of the possible results!

It would still be advisable, from all standpoints, to sterilize the permanently unfit—habitual criminals, feeble-minded and insane persons and the like—but the hordes of borderline cases, upon which such operations cannot now be carried out, because of uninformed public sentiment, could be subjected to these prophylactic injections at the expense of their several communities, until such time as they could demonstrate their fitness for parenthood; those irresponsibles who habitually shirk the burdens of rearing a family would seek such assistance with eagerness, and their unstable strains would rapidly die out for want of procreation; while the most desirable elements in the population would use this new

method no more frequently or regularly than they employ those now available, but would find in it a means for bringing their sex life to the highest level of beauty and richness.

Wiggam, in his fascinating book, "The Next Age of Man", goes so far as to suggest the possibility that it may be possible, in the future, to prepare these luteal extracts in such a way that they will be effective when given by mouth (no very wild prognostication, when we think of the strides which are now being made in organotherapy), thus placing this instrumentality directly in the hands of those most intimately concerned.

The possible results of this discovery are wonderful to contemplate. The human strains which are physically, morally or temperamentally unfit or undesirable as propagators of the race would die out in a generation or two, leaving the world in possession of the progeny of the most advanced and worthy elements of the present population. The inhabitants of this globe would decidedly decrease in numbers, for a time at least, thus relieving the social and economic pressure which many believe to be the most fertile source of wars; but such decrease in numbers would be more than compensated by the increase in the average quality of the people. In the end, the situation would equalize itself, according to the biologic principles so ably demonstrated by Raymond Pearl, and humanity would take up the ordered march of evolutionary progress—but at a much higher level.

Such speculations may seem the idle fancies of an impractical dreamer; but consider for a moment the profound effects upon the world's life which have been produced by such mechanical inventions as the telephone and the automobile; and then try to estimate the potentialities of a revolutionary biologic invention like this. It may well be that our grandchildren will live in a world such as we are unable to visualize, even in our wildest dreams.

Leading Articles

Carbon Arc and Flame Lamp Therapy*

By HERMAN GOODMAN, B.S., M.D., New York City

THE use of the carbon arc lamp has always been found efficient. The carbon flame-arc light gives the rays of the visible spectrum, and others which are shorter and longer.

The temperature of the positive electrode of the carbon arc is about 3,300°C. The arc vapors from the electrodes of pure carbon, which are quite nonluminous, have a strong emission in the violet. As is well known, by using cored carbons, filled with various substances, a highly luminous arc is produced.

Superposed upon the radiation from the arc vapors is the continuous spectrum from the highly incandescent crater of the positive electrode. The result is an intense infrared spectrum, of wave lengths longer than the solar rays transmitted by the atmosphere. If we surround the arc with a glass or quartz globe, some of the infrared rays are excluded; but in turn, the surrounding globe becomes heated and emits infrared rays. No exact comparison can be made between the radiation from the sun and the carbon arc. In a general way, it may be said that the radiation from the white-flame carbon arc is similar to that of the sun, in quality and relative distribution of the solar ultraviolet. The carbon arc is strong in infrared radiations of wave lengths greater than 3,000 mμ, which the earth's atmosphere has eliminated from the solar rays.

Unlike sunlight, this white light is exactly producible and available twenty-four hours in every day. Reyn has done enough experimental work to warrant him in saying that he has proved that far better results are obtained with the carbon arc light than with mercury arc light baths.

When one is dealing with carbon flame-arc lamps as a source of light one does not

have the factor of diminishing low or short wave lengths, due to the gradual reduction of the penetrability of the quartz envelope of the mercury arc. Also, the efficiency of the carbon flame-arc is reached and maintained in a much shorter time than it takes for the mercury arc to reach its full power at each ignition.

The ultraviolet spectrum of the arc lamp, using ordinary carbon electrodes, such perhaps as Finsen first utilized, is confined chiefly to the long ultraviolet zone, with more or less isolated lines in the moderately long ultraviolet. There is practically no measurable output in the vital ultraviolet zone from pure carbon electrodes operating at 17 amperes.

As is well known to spectroscopists, the radiation emitted by an arc of pure carbon consists principally of a wide band at about 2500 angstrom units and a more intense band, the "cyanogen band", at about 3890 angstrom units. The radiation in the visible spectrum, increasing in intensity toward the red, comes from the highly incandescent, solid electrodes. The intensity in this part of the spectrum depends upon the degree of incandescence of the electrodes, which are viewed to best advantage in the right-angle trimmed arc, with the horizontal electrode positive.

On analysis of the crater and of the flame between the two craters of the positive and negative carbons, it has been found that the flame which exists between the cored carbons in modern lamps is the higher and richer source of the ultraviolet radiations.

The crater of the positive electrode emits an intense white light, which is mixed with the radiation of the arc vapors. This fact is usually overlooked in discussions of the radiation from the carbon arc. The vapors from the pure carbon arc contribute but a small amount to the total radiation emitted. For this reason, we are using the name carbon flame lamps for the type of apparatus used by us in the work with the impregnated carbons.

*The material here assembled is drawn from "Photometric Measurements of the Carbon Arc and Other Light Sources Used in Therapy" by W. W. Coblenz, M. J. Dorcas, and C. W. Hughes; the "Handbook on Carbon Arc Operations" of the National Carbon Company, Inc.; with comments, additions, etc., from the Author's book, "Basis of Light in Therapy".

Great advances have been made in the carbon electrodes by impregnating the carbons with various salts. This is the great hope in carbon flame lamps for phototherapy, because it will be possible to advise the particular carbon-impregnated electrodes for the zone needed in the particular therapeutic endeavor. I have been more or less instrumental in having this work initiated, to have impregnated carbons made which are richest in the vital zone of the ultraviolet, and which would emit this radiation at low amperage. The success of this effort is a step forward in prescription phototherapy.

In order to obtain a quiet-burning arc, the electrode is made of an outer hard shell of compact carbon, with a core of soft carbon flour and a small amount of potassium silicate or other arc-supporting material. This is known as the "neutral-core" carbon or "dochtkohle". By using the salts of various metals, or the finely powdered metal, mixed with carbon flour, as a core, or a metal wire inserted in the boring through the hard carbon shell, the various impregnated carbons are obtained. Trade names do not conceal much of the contents of the electrode from the investigator provided with a spectroscope, though it may be a badge of a method of preparation.

Cored Carbons

The "white-flame" and "carbenion" carbons contain, among other things, the fluorides of the rare earths remaining after the removal of the thorium from monazite sand.

The "blue-flame" carbons contain iron, which is known to have an emission spectrum of many lines, especially in the ultraviolet.

The "yellow-flame" carbons contain calcium, and the "red-flame" carbons are strongly impregnated with strontium salts.

The "effekt-ultra," the "ultra-sonne", and the "nickle-cored," carbons give the same emission spectrum; namely, that of nickel, which has a strong ultraviolet emission in the region of 2200 of 3500 angstrom units. Some samples of nickel-cored carbons contain wires 1.5 mm. in diameter.

The "copper-cored" carbons are made of the finely powdered material. The "zinc-cored" electrodes contain the powdered material. Other samples, with a "white-flame" material in the core, contained also a zinc wire; but this did not seem to have a marked effect on the radiation emitted. The "alumi-

num-cored" carbons were first tried out by inserting a 1.5 mm. wire in holes bored in graphite electrodes. Subsequently, aluminum wires 1.5 and 2 mm. diameter, also the powdered material, were placed in the regular carbon shells in the factory. The 1.5 mm. wire seemed to produce an unsteady arc as a result of oxidation. This should prove to be an excellent source of isolated intense emission lines, useful to spectroscopists interested in ultraviolet absorption spectra.

The "cobalt-cored" arc contained the powdered metal. The arc burned smoothly, emitting a strong ultraviolet radiation. The high intensity ("H.I."), white-flame carbons, 11 and 13.6 mm. in diameter, contained a "hard-pin" core.

The effect of introducing various salts into the carbon arc is well known. In the "red-flame" cored carbon, the effect is to suppress the cyanogen band, while the strontium has a strong emission in the red end of the spectrum.

The aluminum, cobalt and nickel arcs provide a strong emission in the extreme ultraviolet, at about 2300 A.U., supplementing the carbon band at about 2500 A.U. The emission band of nickel, at about 3500 A.U., seems to supplement and reduce in intensity the cyanogen band at 3890 A.U., giving a characteristic pair of maxima in this spectral region.

The presence of powdered copper and tungsten in the cored carbon arc does not seem to increase the ultraviolet component appreciably.

This conclusion is based upon the results obtained by the two methods of measuring the ultraviolet radiation: and it is disappointing, especially for tungsten, in view of the fact that the latter has been put forward for therapeutic purposes. However, considering the expense involved, the commoner metals, such as iron ("blue flame"), cobalt, and nickel fortunately emit the desired rays. The "blue flame" is fairly rich in ultraviolet radiation of wave length from 2300 to 3200 A.U., where most other carbons, operated on the same current, are relatively much weaker in radiation intensity. It is, of course, well known that the blue flame arc has a rapid photographic action, and that it easily sunburns the untanned skin.

It is evident that the radiation emitted by the various carbon electrodes is exceedingly complex. When the lamp is provided

with a chimney or reflector which becomes heated, further complexities are introduced. The heat radiated by the globe or a metal hood has no counterpart in sunlight, and it may be uncomfortable to the patient. The operating distance from the patient is therefore a matter of trial and is not to be decided entirely by the radiometric measurements of the naked electrodes.

For example, in a certain type of carbon arc lamp inclosed by a chimney, the radiant flux was found nearly the same as that of the sun, in spectral composition and in intensity, at a distance of 1 foot from the arc. However, the heat from the glass globe surrounding the arc was so intense that it was uncomfortable to the bare hand. But at a distance of 2 to 3 feet from the arc, and at an angle of 45° below the horizontal plane throughout the arc (on direct current with the upper electrode positive; that is, the hotter) the exposed hand felt the warm comfortable glow experienced in sunlight.

Effect of Combinations of Neutral Core and Impregnated Carbons

An examination of arcs in which the positive electrode was a metal-core carbon and the negative electrode was a neutral-core carbon, and vice versa, was made by Coblentz. When the soft neutral core is positive, the effect is to increase the intensity of the cyanogen band at 3890 A.U. Using an arc between blue-flame and neutral-core carbons, the cyanogen band, at 3890 A.U. is as intense on 22 amperes, when the neutral core is positive, as it is on 30 amperes when the blue-flame electrode is positive. Evidently the emission of the cyanogen band is strongest in the carbon arc, and it is more intense on a direct current than on an alternating current, in which the average temperature is lower and more nearly the same in the two electrodes and less ash is produced. The ash of the carbon sold for illuminating purposes is ordinarily about 1/20 to 1/10 percent and consists chiefly of iron, silica, alumina, and a lesser amount of calcium material.

The best therapeutic arc lamps are equipped with screens to prevent any ash falling upon a patient, although with vertical trim lamps there is practically no discharge of such ash. In general, it is best to irradiate the patient at an angle rather than to have the light directly over him. The amount of light, but not its character,

is diminished by a mesh which acts as a physical obstruction to a part of all the rays. The amount shut off by a screen depends on the proportion of wire in a mesh area and according to the material of the mesh.

When the carbon arc is inclosed with a close-fitting chimney, the gasses surrounding the arc expand and force sufficient air out of the chimney to establish an equilibrium in pressure; that is, atmospheric pressure. When the arc is extinguished, cold air rushes in. But this does not mean that the arc was operating under reduced pressure; that is, in a partial vacuum. The pressure was the same as, or slightly above, the atmospheric pressure, but the volume of air was reduced.

The carbon flame lamp gives off rays in the infrared. This is considered an advantage. The presence of the infrared and the red rays causes an increased dilatation of the vessels and a broadening of the blood bed. This last is held to be important. Many physical therapists, who utilize the mercury arc in quartz, have been in the habit of giving the patient a preliminary exposure with radiant heat in the form of carbon-filament bulbs or even tungsten filament bulbs. The rationale was to bring a flush to the surface capillaries. The use of the carbon flame lamp combines the infrared, the red, the visible spectrum, and the ultraviolet.

Certain features of the carbon flame lamps are not so favorable. The carbons must be replaced at regular intervals. In most modern lamps, the trim, as the replacement of the carbons is called, can be done in a moment. With polished carbons, the hands are seldom soiled. The sparking is very inconsiderable. The fumes are not troublesome. The walls of the treatment rooms are not blackened, if the lamps are operated at the proper electrode distance for the amperage. With our very high intensity lamps, the motor revolves the carbons and keeps them at proper distance.

Physics and Chemistry of the Arc

It was of interest to determine the effect of using direct and 60-cycle alternating current upon the energy radiation. It was, of course, to be expected that on D. C. one electrode would become much hotter than the average on A. C. and, since the arc was a vertical trim, this might transmit more infrared than on A. C.

The effect of increasing the temperature of one electrode on D. C., above the average attained on A. C., is to increase the ultra-violet emission, especially in the cyanogen band at 3890 A. U. Some of our lamps are made to operate on both the direct and alternating current. Other lamps are not so devised.

It does not seem essential in a paper of this kind to discuss the chemistry of the carbon flame arc. Electrophysicists have their own ideas as to this. It may not be amiss to suggest the problem, in order to give an insight into the vastness of the subject of physical methods.

Engineers consider arc image phenomena, flame-tip color, sparks, smoke, odor, sequence of distillation, and especially the nature and color of the deposit on the electrodes. All these may be modified by impregnating the carbons, by using carbons of different manufacturers, or by varying other factors. It might be mentioned that, by using the carbon arc in a specified manner, analytic work can be done which detects 0.02 mg. of silver and tungsten; or 0.1 mg. for a range of other metals.

For a point source of light for projection purposes, the high intrinsic brightness obtained from the 125-ampere, "high-intensity," arc is extremely useful. It is probably to be expected that, as the current is increased, more energy, of shorter and shorter wave length, will be emitted, but no direct measurements are available.

Mechanical Operating Conditions

Operating conditions of the various carbon arc and flame lamps must be carefully watched. We have repeatedly mentioned the fact that there is a proper ratio between amperage, voltage, and cross section diameter for each grade of impregnated carbon electrode.

The National Carbon Company, Inc. properly described a number of features of poor operating conditions and the defects arising therefrom. In the direct current, low-intensity lamp, improper proportion in the upper positive and the lower negative carbon results in wandering or travelling of the arc. This diminishes the energy from the current consumed, is expensive, and results in poor exposure.

We noted that the consumption of the core and that of the shell resulted in a variation of the energy from the cored carbon electrode. The same thing may be

seen visually with the blue-flame carbon, for example, there being an alternation of the illumination corresponding with consumption of the shell, and then diminution with consumption of the core.

Excessive penciling of the carbon electrode is a sign of overloading. Spindling may also be due to the fact that the carbon holders are not clean. They should be cleaned regularly, and in some instances tenacious deposits scraped out.

Sputtering of the arc may be caused by the carbons not being properly trimmed or set. It may also be caused by the arc being too short, or more frequently by damp carbons. Carbons are porous, and absorb moisture. They are baked at extremely high temperatures in the factory, but may have been exposed to damp weather or damp storage places. Carbons should be stored in a dry place.

We have seen carbons become red and even white hot from the tip to the holder in apparently well constructed lamps. In one instance, we found that the carbons were getting the full capacity of the line, 30 amperes (6 mm. carbons employed), because the rheostat had been short circuited.

We have also seen one carbon, in parallel position carbons, burn much more quickly than the other. This is the result of the direct current and the remedy is to reverse the polarity periodically or, better still, to use a large-diameter positive carbon.

On an alternating current, the possible defects of carbon operation are similar to those encountered in direct current operation.

Some carbon arc and flame lamps are arranged to operate with the positive carbon (on direct current) set in a horizontal position and the negative at an angle of about 75 degrees with the horizontal. In this type of lamp the negative carbon should be set so that a square or cup-shaped crater is formed. The two carbons should be in proper alignment.

It may not be known to some physicians that a blast of breath may extinguish low-amperage arcs. Thus it is very essential that the lower amperage carbon arc or flame lamp be properly housed and that the room be free from drafts. The problem of ventilation is a nice one. We have in our work used with much satisfaction an aerator which keeps the air in circulation and yet sets up no drafts. These aerators

may be in the same treatment booth with open carbon arc or flame lamps.

This discussion of the care of the operation of carbon arc and flame lamps seems much more complicated than it actually is in practice. The factors of amperage, voltage and cross section diameter of the carbons employed must be proper; then troubles will never arise. We have had lamps in active service for more than two years and have never had to stop work for an hour due to mechanical faults.

Impregnated Carbon vs. Quartz-Mercury Arcs

Reports might give the impression that the impregnated carbons are inferior sources of total ultraviolet energy. There are publications of the Bureau of Standards* which give more definite information concerning the light from these sources.

Bureau of Standards Scientific Paper No. 378, page 246, gives data comparing the proportion of radiations of wave lengths shorter than 14,000 A.U. which are below 4500 A.U. The figures are: 56 percent for the iron (magnetite) arc; 59 percent for an impregnated arc used for dye fading; and 68 percent for the quartz-mercury arc. In other words, the proportion of the ultraviolet to total light is about the same for the three sources. The carbon arc gives much heat radiation of wave lengths longer than 14,000 A.U., so that, if we consider total radiation, we get the smaller figure for the ultraviolet component.

One more very important point is indicated in Bureau of Standards Scientific Paper No. 330. On page 19, is given information about the actual amount of ultraviolet rays from various sources. The quartz mercury arc was compared with a violet-flame carbon arc. In each case the radiation was investigated at a distance of 40 cm. from the source. The radiation from the carbon arc which was composed of waves shorter than 14,000 A.U. was equivalent to 0.0051 gram-calories per square centimeter per second. The corresponding figure for the mercury was 0.0017. We have seen above that the ultraviolet percentages of this range are about the same. Therefore, the actual quantity of total ultraviolet in the light from this

carbon arc was three times that of the light from the mercury arc.

It seems fair and just to consider the actual quantities of light from these sources. The apparent discrepancy in the data, considered on a percentage basis, is due to the fact that the carbon arc usually consumes more electric energy and gives a much greater quantity of all kinds of radiation.

In the modern arc lamp, with impregnated carbons, the arc itself is utilized as the source of the light and not the crater alone, which was the luminous point with the Finsen lamp. On alternating current, best results are obtained if carbons of the same diameter are used in each holder. On direct current the positive carbon should be slightly larger in diameter than the negative carbon.

The light emitted by a carbon flame-arc varies with the current consumption and the diameter of the carbons. The ratio varies according to a formula which gives a disproportion vastly in favor of greater amperage and larger carbon diameters. Thus it is well known that the strength of the electric current greatly affects the radiation emitted by the carbon arc. The rapid increase in the intensity of the cyanogen band at 3890 A.U., in changing from 5 to 26 amperes, is especially noteworthy. On the higher currents the intensities were reduced in scale, and both A.C. and D.C. were used.

Suggestions Regarding Treatment

The temperature of the positive crater of the carbon flame-arc is about 3700°C. The larger the amperage of the lamp, the more heat is generated. Since the laws of light are operative, intensity of light decreases with the square of the distance. The further from the source of light he is, the less the patient gets. For this reason a lamp of lesser amperage, being less hot, may be operated closer to a patient, and may be effective. More than one small lamp may be used to radiate several patients. The crater of the carbon arc may be 30 to 35 cm. above the couch on which the patient is reclining when treatment is administered in that position.

The installation of the high amperage necessary to operate carbon flame-arc lamps of sufficient intensity to effectively act on patients may deter some physicians from getting these lamps. The same futile argument frequently prevents installation

*Consult Bureau of Standards Scientific Paper, No. 539 for chart.

of x-ray or other apparatus. The use of carbon arc lamps of such low amperage requirements as to operate on ordinary house circuits has been recommended.

We use cored carbons, impregnated with various salts of the so-called flame carbon variety. Carbons must be used in definite ratio to the current consumption. A 6 mm. carbon is used with an 8 ampere lamp; a 10 mm. carbon is used at 18 amperes; and a 13 mm. carbon is used at 25 amperes. We also have high-intensity carbon flame lamps of 88 to 120 amperes operating now.

The current density at the tip of the carbon may be advanced to a point just before the carbon starts to spindle, that is, before the tip begins to shape itself into a pencil point, best described as penciling. If the ratio of carbon to amperage is not the proper one, in the sense that too small a carbon is used, the factor of spindling is very important, as the carbon point will be reduced below a point of efficiency. The feature of excessive spindling is considered bad practice.

The impregnated arc emits strongly in the visible spectrum, the amount so emitted depending upon the kind of salts used in the carbon electrodes. In these carbon arcs, the short ultraviolet rays, at 2900 to 3100 A.U., are probably more intense than in natural sunlight where, as already stated, the intensity is less than one-millionth of that of the visible rays.

As is the case of very bright sunlight, the eyes should be protected with colored glass goggles when using the carbon arc. I have used goggles which exclude all light, on my patients, in other words, actually blindfolded them. The patient should turn to expose all the cutaneous

surface, if only one lamp is used in treatment.

The effects observed with proper exposure to carbon light radiation over the entire body include pigmentation of the whole exposed skin surface; rapid healing of any moist lesions; increase in body weight; improvement in general condition; and increase of the small lymphocytes on blood count. There is a feeling of well being. The patient becomes brighter and more active. Many skin blemishes clear nicely. The amount of pigmentation must not be taken as an index of the reaction of the body to the radiation. It is not possible to claim that the production of the pigment is the cause of the improvement in the general health or the local conditions.

When the patients show no abnormal rise in temperature and are not debilitated to any degree, long exposures may be given from the first. An exposure of twenty minutes, divided front and back, with one lamp, or ten minutes front and back, with two lamps, is not excessive for the first exposures. We increase the exposure at each sitting until exposures of two hours are given for a number of diseases.

The frequency of exposure is ordinarily on alternate days, but we have exposed patients every day. The distance varies with the reaction. With the high-intensity arc, exposures are much shorter at the same distance.

On the whole, there seems to be no doubt that there is a useful and, as yet, incompletely explored field of therapeutics for the employment of the carbon arc lamp in general exposures for conditions of diseased skin, for metabolic states, for deficiency diseases and for tuberculosis.

18 East 89th Street.

The Value of a Colostomy

By CHARLES J. DRUECK, M.D., F.A.C.S., Chicago.

THE word colostomy (sometimes called colotomy or sigmoidostomy), literally means an opening or mouth in the colon, and in these pages refers to the establishment of an artificial opening into some part of the colon after the bowel has been attached to the abdominal wall; and having for its object the diverting of the fecal stream. The older term colotomy, "to cut into the colon," is used to describe the

opening of the colon to remove a foreign body, or tumor or for some other purpose, and the immediate closure of the rent in the bowel.

Pillrore, in 1766, performed the first colostomy by opening the cecum in a case of rectal cancer with complete obstruction. The lower portion of the descending colon, the sigmoid flexure, is the more frequent location of the fecal vent and that

technic will be described, but the establishment of an artificial anus elsewhere in the colon is identical.

There is a widespread misconception as to the inconveniences and discomforts of a colostomy, a dread which is unfortunate and unwarranted. In most cases we can assure our patient such adequate control that, except in the most favorable high-lying growths, I do not recommend further surgery to reestablish the continuity of the rectum with the anal canal.

A properly constructed artificial anus with a long sigmoidal loop, in which the feces collect and give the patient warning that a bowel movement is imminent, is intended as a permanent relief of the obstruction of the lower bowel and is not a makeshift for the prolongation of life. It must obviate the uncontrollable discharge of feces and flatus and the painful dermatitis in the neighborhood of the exposed mucosa. Such an artificial anus need not necessarily make the individual's remaining life one of isolation from his fellow men; but we must frankly admit that no orifice yet devised will control the outflow of the intestinal contents when the material is thin and the peristalsis is exaggerated. Colostomy must, however, always be considered a palliative procedure, undertaken as a temporary measure for the relief of a removable condition in some portion of the bowel below the opening, or a permanent measure as the only available means of affording some help and comfort in an unremovable condition.

One of the fundamental surgical principles involved in the treatment of diseased or injured tissues is that physiologic rest and immobilization are most valuable therapeutic agents. Unfortunately, many organs, which would be benefited by complete suspension of activity are so vital to life that complete rest is impossible. For example, the circulatory and urinary systems must be managed with a minimum of function continuing.

The colon, however, can be completely excluded from functional activity and, in the treatment of various pathologic conditions which affect it and which cannot be relieved by medical treatment, can be cured by placing a stoma cephalad to the lesion. The prolongation of life and increased comfort in incurable conditions of the colon, and complete relief from many infective diseases of the large bowel made

possible only by colostomy is evidenced by its increasing employment in recent years.

While colostomy is a surgical procedure, its employment in the treatment of colonic disease offers much promise to the internist in the successful treatment of diseases of the large intestine. The majority of colostomies are performed as a step in the relief of obstruction of the bowels in cancer of the rectum, where it is found necessary to excise the rectum and sphincter muscles, and where the continuity of the bowel cannot be reestablished. An anus in the normal location, but without sphincters, is a torture; whereas an abdominal anus, properly constructed, can be made comfortable.

In the control of inoperable cancer of the rectum, a colostomy not only relieves the obstruction but at the same time decreases very markedly the irritation of the ulceration in the cancerous mass and removes a very considerable source of continuous intestinal intoxication. Any form or degree of intestinal obstruction saps our patient's vitality unless promptly relieved by the establishment of an artificial anus; and therefore I recommend that colostomy be performed at the earliest possible moment after we are convinced that the tumor is inoperable, because colostomized patients live longer, suffer less and may be given the benefit of treatment with radium and x-rays when the bowel is put at rest and kept clean with proper irrigations. Even for operable cases it is often advisable to perform the colostomy and then wait for two weeks before going on to the radical operation.

Frequently, after an artificial anus has been made, a tumor previously considered to be inoperable may be successfully removed, on account of its diminution in size and the great improvement in the condition of the patient. Also it sometimes happens that an artificial anus, planned to be permanent, may cease to be longer required, through unexpected and favorable circumstances. A temporary colostomy may be indicated where the disease is curable by treatment or surgical procedure and in which it is possible to reestablish the normal fecal canal; also as an emergency measure a colostomy may be performed, perhaps under local anesthesia, where the patient is suffering with complete obstruction and is *in extremis*.

With these several necessities in mind the colostomy must be so constructed that, should occasion require, treatment of the distal segment may be applied from above and that the stoma may later be closed without endangering the patient's life.

Locating the Colostomy

Various sites have been recommended for the location of the artificial anus, but it is unsurgical to make this choice until after a roentgenologic study and an intraabdominal examination through the laparotomy wound, to note the location and extent of the disease and to determine a plan of treatment. Any portion of the colon may be used, but obviously a colostomy nearer the distal end of the large intestine is preferable to one toward the proximal segment. The colostomy should, as a rule, be as far from the ileum as possible.

The ascending colon must necessarily be used in the case of obstruction of the transverse colon; similarly, the transverse colon when a left sided colostomy is impracticable, as for example, for the relief of stenosis of the descending colon, or when an unusually short mesosigmoid makes it difficult to bring out a satisfactory loop of the sigmoid colon for the usual left sided colostomy. If the opening is meant to be temporary, colostomy in the transverse colon is comparatively easily closed.

If local treatments are to be given through the stoma it may be placed at any point above the disease. If resection of the diseased area is intended, the bowel should be dragged down until the upper segment is taut, that as much as possible of the sigmoid may be left below for the re-establishment of the natural intestinal canal. The longer the loop below the abdominal anus the easier will be the subsequent operation of extirpation or resection. Such a stoma must always be placed sufficiently distant from the disease to allow freedom in removing the diseased portion and in rebuilding the structures afterward.

The abdominal anus must never be

located near a cancer lest it become involved in the malignant extension.

Sometimes the sigmoid has a very short mesentery which prevents the bowel being drawn well outside of the abdomen, or inflammatory adhesions may produce the same condition. In such patients, the colon higher up must be used, because if the bowel is drawn up forcibly it will cause the patient much agony afterwards, due to traction on the mesenteric nerves, and later the colon will retract and tend to close the aperture, thus frustrating our purpose.

The descending colon usually has a very short mesentery, its posterior one-third lies behind the peritoneum and is somewhat fixed to the posterior abdominal wall. The sigmoid, however, is completely surrounded with peritoneum and has a long mesentery, varying from three to six inches in length.

Other things being equal, my preference is to locate the colostomy in the lower abdominal quadrant by an incision splitting the fibers of the left rectus muscle, because this incision is very serviceable for the abdominal exploration and it may be used for the artificial anus without disfiguring the patient with a second abdominal scar. With the new anus in this location the individual may sit upon an ordinary toilet seat with a basin underneath the opening and relieve himself with little or no trouble. The parts can also be easily cleansed. Also because of the absence of such bony prominences as the iliac crests and the anterior superior iliac spine and the presence of the transverse lines and the costal arch, retentive apparatus to catch the feces, if used, is more readily kept in position. Bringing the loop of bowel through the split rectus muscle affords a certain degree of sphincteric control over the evacuations.

By operating in the intramuscular manner, hernia is less apt to follow and additionally greater sphincteric control is secured.

30 N. Michigan Ave.

The medical man should use all the science he knows as a tool, and not as a crutch, and the sooner our medical schools get over the idea that "science" gives the student a "foundation", the sooner will our Medicine become "scientific".

—Dr. Charles P. Emerson.

Nickel Sulphate as a Test for Alkalis

(A Useful Reagent in Urine Analysis)

By CLIFFORD MITCHELL, M.D., Chicago

NICKEL sulphate in solution, as a test for sugar in the urine, was proposed some time ago, but the writer has not found it superior to Benedict's alkaline copper solution. In experimenting with it, however, an entirely new and useful field for use was discovered, as follows:

Make up a strong solution—say, one ounce of c.p. nickel sulphate in three ounces of distilled water, filtering if it is cloudy after standing. (The writer uses a solution made by dissolving 20 Grams in 80 cc. of water). This solution is one of the handiest the writer has yet discovered for detecting alkaline compounds in urine.

Proof of this is readily obtained by dissolving 2 or 3 Grams of sodium carbonate or bicarbonate in 100 cc. of water (about an ounce in a quart), and floating a few cc. of it on a little nickel sulphate solution, in a test tube of ordinary size, with a technic similar to that used in performing the contact test with nitric acid for albumin.

A white ring, band or cloudiness will immediately be seen at the line of contact between the alkaline solution and the nickel solution.

In the case of urine, the test is performed in the same way: pour the nickel solution into the test tube until its height in the tube is about an inch; then, taking up urine with a medicine dropper provided with a rubber nipple, cause it to flow slowly down the side of the test tube held almost horizontal in the left hand. After about half an inch of urine has been thus floated on the nickel, raise the tube slowly to the perpendicular and, if a white ring, band or cloudiness is seen above the green nickel solution, the urine contains excess of alkaline compounds, such as ammonium or sodium carbonates. The odor of ammonia or the presence of triple phosphate crystals, seen by microscope, will differentiate ammonium carbonate.

Practical Uses

The test is useful as a referee in those frequently occurring cases where urine

turns blue litmus slightly red and methyl red slightly yellow, leaving the doctor in doubt whether to call it "acid" or "alkaline."

If the nickel test is positive, the urine is subacid or alkaline; never normally acid or hyperacid. The hydrogen ion concentration test, with bromocresol purple, will always show subacid urine when the nickel test shows the white ring or cloudiness.

Again, if the doctor wants to know promptly whether a copious sediment is amorphous phosphates or amorphous urates, he may be sure it is *not urates* if the nickel test is positive, even though the urine reddens litmus distinctly.

When a patient is taking sodium bicarbonate, the nickel test will show it in the urine, if the amount taken is such that as much as 0.2 percent is present in the urine; hence the test is useful in detecting soda addiction. The writer finds the test positive in soda eaters even when the blue litmus is turned distinctly red.

In the summer time, a nickel-negative reaction shows that the urine is sufficiently acid to be worth examining.

When an effort is being made to alkalinize the patient, we may be sure that enough alkali has not been given if the nickel test is negative.

In view of these various useful applications of the test, the writer thinks that we should welcome it as an addition to our diagnostic armamentarium.

The solution keeps well and does not lose its virtues on exposure to light.

Albumin does not affect the test.

As the test is performed in the cold, no interference is caused by the presence of sugar.

On account of the bright-green color of the nickel solution, the line of demarcation between the urine and the nickel is sharply shown and the presence of the faintest white ring or cloudiness easily detected.

25 East Washington St.

The Etiology and Treatment of Gastric and Duodenal Ulcer*

(The Use of Cholesterin and Bile Salts)

By E. ROSENBERG, M.D., Cleveland, Ohio

THE many disappointments in the end results of our surgical as well as medical treatment of gastric and duodenal ulcer are due, no doubt, to the disparity of views on the etiology of these lesions. There are many theories current, but none seem to help us in our therapeutic efforts. Recently Dr. Leo Jarno, of Budapest¹, published a report based on experimental and clinical evidence in which he points to a constant decrease of blood-cholesterin in his ulcer cases, due to a decreased duodenal regurgitation of bile into the stomach, as a possible etiologic factor in the formation of gastric and duodenal ulcer and the syndrome of chronicity or recurrence characteristic of these lesions.

The impetus to Jarno's study was given by his experimental work on "Antipepsin," to which we attribute the prevention of autodigestion of the gastric mucosa by the acid secretions of the stomach. The author denies the existence of such anti-ferment, on the grounds of his experimental results, and claims that such antipepsin action is exerted by the amino-acids of the bile regurgitating from the duodenum into the stomach. On the basis of these findings he resumed the bile therapy in gastric ulcer, as originally suggested by Glaesner² and Palfrey³, but used in addition large quantities of cholesterin, since he found low blood-cholesterin values in every ulcer case under his observation.

In his series of twenty well-recorded cases treated with this combination, he obtained such remarkable results, improvement of subjective symptoms and reduction of acidity values that a revision of the prevailing theories seemed to him warranted. Coincident with the improvement of symptoms, after but a short period of treatment, the blood-cholesterin values showed a proportionate increase. He also noticed that the blood-cholesterin level and the severity of the ulcer symptoms displayed an inverse ratio; i.e., the more severe the case, the lower the blood-cholesterin level.

The subject of cholesterin metabolism has of late received much attention, since it furnished surprising information for the

correct interpretation of many pathologic conditions hitherto incomprehensible to us. A critical consideration of the subject, therefore, in the light of our interpretation, is being presented, with conclusions based on the study of a series of nine cases. In this series, three were gastric and six duodenal ulcers.

Diagnosis was based on gastric analysis and roentgenography. In two cases, x-ray findings were negative. All cases showed more or less hyperacidity, associated with typical clinical symptoms. With the exception of two cases, owing to a faulty technic of blood-cholesterin estimation, hypcholesteremia of different grades was found. The duration of the disorder varied from a few months to two years.

A modified Sippy diet was ordered and the original combination of bile with cholesterin administered orally or intramuscularly, or sometimes both orally and intramuscularly, in the form of cholesterin and olive oil.[†] The improvement noticed after the third day was remarkable in each case. With the exception of one case with a severe hematemesis, all were ambulatory but were not allowed to follow their vocations.

Case Reports

Case 1.—Age 32; sick two years; complaint, pain after eating. *X-ray diagnosis:* Gastric ulcer.

Treatment: Cholesterin and bile, orally; modified Sippy diet.

Blood-cholesterin estimations Feb. 16, 1925, 0.07; on Feb. 28, 0.12. This patient showed considerable improvement after 2 days and was advised to continue treatment with cholesterin and bile for at least two months. No recurrence to Sept. 1, 1927.

Case 2.—Age 28; sick three months; complaint, "hunger pain." *X-ray diagnosis:* duodenal ulcer.

Treatment: Cholesterin and bile, orally; Sippy diet.

Cholesterin estimations Apr. 1, 1927, 0.08; Apr. 12, 0.12. Improvement of symptoms in this case was almost immediate and has persisted up to Sept. 1.

Case 3.—Age 29; no previous illness; complaint, sudden hematemesis. *X-ray findings,* positive for gastric ulcer.

Treatment: Cholesterin, orally and intramuscularly; glucose solution by Murphy drip; Sippy diet on the third day.

[†]All the materials were furnished by the firm "Tres", of Budapest, for which courtesy I wish to acknowledge my indebtedness. The ingredients known under the trade name "Salvacid" consist of ox bile, glycochol salts, cholesterin, extract of salvia and a small dose of an alkaline vehicle.

*From the Medical Service, Hospital Clinic, Cleveland, Ohio.

Blood-cholesterin estimations: Dec. 26, 1926, 0.05; Jan. 3, 1927, 0.09; Jan. 20, 0.10; Jan. 30, 0.15. Discharged with instructions to continue cholesterin and bile treatments for two months. (This patient is the only one of the series who was kept in bed during treatment.) This patient ate irregularly and smoked excessively, causing some gastric distress, which cleared up promptly following resumption of treatment for a few days.

Case 4.—Age 38; "hunger pain," hyperacidity, inveterate smoker. Diagnosis of duodenal ulcer confirmed by x-ray.

Treatment: Cholesterin and bile, orally; modified Sippy diet.

Blood-cholesterin estimations, Jan. 12, 1927, 0.08; Jan. 20, 0.12; Feb. 2, 0.20. Entirely recovered.

Case 5.—Age 27; ill two months; complaint, pyrosis and pain after eating. X-ray examination negative. Hyperacidity present.

Treatment: Cholesterin orally; modified Sippy diet.

Blood-cholesterin estimations Jan. 1, 1927, 0.09; Jan. 20, 0.16. Improvement on second day.

Case 6.—Age 27; ill five months; complaint, vomiting, constant pain hyperacidity. X-ray diagnosis, duodenal ulcer.

Treatment: Cholesterin, orally and intramuscularly; Sippy diet.

Blood-cholesterin estimations Feb. 12, 1927, 0.07; Feb. 20, 0.12; Mar. 1, 0.17. Pain and vomiting stopped on third day.

Case 7.—Age 22; ill two months; complaint, irregular pain, hyperacidity. X-ray diagnosis, duodenal ulcer.

Treatment: Cholesterin and bile, orally; Sippy diet.

Blood-cholesterin estimations, Nov. 3, 1926, 0.17; Dec. 4, 1926, 0.17. (These figures are probably unreliable, due to faulty technic.) Discharged, clinically cured.

Case 8.—Age 33; ill for more than a year; complaint, pain $\frac{1}{2}$ hour after eating, hyperacidity. X-ray diagnosis, gastric ulcer.

Treatment: Cholesterin and bile, orally, for three weeks; Sippy diet.

Cholesterin estimations, Oct. 13 and 18, 1926, unreliable. Free from pain at the end of three weeks.

Case 9.—Complaint, hunger pain for several months, hyperacidity. X-ray diagnosis, negative. Clinical diagnosis, duodenal ulcer.

Treatment: Cholesterin and bile, orally; modified Sippy diet. Cholesterin estimations: Mar. 2, 1927, 0.07; Apr. 1, 1927, 0.15. Entirely free from symptoms on latter date.

It is difficult to estimate the ultimate results of this treatment, considering the remissions often seen after any treatment or sometimes after no treatment at all, but the almost immediate response to cholesterin and bile treatment was so striking and, parallel with it, the gradual increase of blood cholesterin values was so con-

vincing that there is reason to hope that a correlation between gastric ulcer and deficiency of bile in the stomach, with concomitant hypocholesteremia as intimated, will prove to be conclusive.

In case No. 3, with hematemesis, for instance, we see that the blood cholesterin values rose from 0.05 to 0.15 within four weeks. In case No. 5, the increase from 0.08 to 0.20 was accomplished in 11 days, but in this instance symptoms were possibly due to a simple hyperacidity, since the x-ray findings were negative.

It might be argued that under-nutrition, characteristic of individuals with gastric disturbances and associated with a defective alimentary source of cholesterin, may account for the hypocholesteremia, but, judging from the high cholesterin values found in malnutrition or cachexias in malignant disease, such an inference seems unsound.

Cholesterin Metabolism

The cholesterin metabolism and its origin in the human body are functions upon which very little experimental work has been done and very meager data are available at present.

A great and varied significance is now attributed by physiologists to cholesterin and the lipoids in general, in the normal and abnormal variations of functions and metabolic processes. It is definitely established that cholesterin is present in every living cell and body tissue, in both a free and combined form, as esters of the higher fatty acids. The question as to where and how it is formed in the organism is still under dispute. It is a known constituent of the bile, where the bile salts keep it in solution (Wieland). Rothschild observed that the cholesterin content of foods had an influence on the cholesterin of the blood as well as of the bile (alimentary source).

Some authors, as Grigaut, claim that certain cells in the cortex of the adrenal glands form cholesterin so that, according to Albrecht and Weltman, the adrenal glands are supposed to regulate the cholesterin content of the blood. Others deny this claim.

In a free condition, cholesterin acts as a neutralizing agent to a number of different poisons, hemolytic poisons, bacteria and their toxins, no matter whether of endogenous origin (generalized systemic or focal infections) or of exogenous nature (metabolic intoxication). Since the leukocytes contain large amounts of cholesterin,

their phagocytic action and the part they play in infections, together with their power as ferments, accentuate the importance of cholesterol metabolism. This lends support to the theory that the lipoids, to which cholesterol belongs, act as defenders of the organism analogous to antibodies, or that they are a part of the vitamins.

In pulmonary tuberculosis, for instance, according to Peterson and Levison, a decrease of the blood cholesterol and the lipoids indicates an ominous prognosis, while in infectious disease an increase of the cholesterol level signifies an improvement in the condition of the patient (Bersani); and by means of cholesterol administration many workers have succeeded in favorably influencing the course of the disease. The fact that in pregnancy, in tuberculous women, the pulmonary process seems to come to a standstill, in spite of the increased demands on the organism, can be explained only on the ground of hypercholesteremia being present in pregnancy, as the result of which the defensive factors are more in evidence; while the same type of cases showing a low level of cholesterol prognosticate a fatal issue before the termination of pregnancy.

The interrelation between cholelithiasis and hypercholesteremia is the reason why gastric or duodenal ulcers and cholelithiasis are seldom found together, except when developing contiguously, and also why, in the second half of pregnancy, where hypercholesteremia is present, gastric ulcers are rare; while cholelithiasis—aside from possible mechanical causes—is a frequent complication.

Gastric and Duodenal Ulcer

The definite etiologic relationship established between gastric and duodenal ulcers and focal infections is interestingly explained by Dr. Jarno in the following way: The toxins are generally neutralized by the cholesterol contents of the blood, and as long as there is an adequate supply of cholesterol available no bad effects result from the toxins. However, in time, the large demands made on the cholesterol supply by the constantly forming toxins from the chronic foci, gradually lead to a decrease of the blood-cholesterol level, as a result of which large amounts of unneutralized toxins enter the circulation. The vegetative nervous system, and especially the vagus, as is well known, is very

sensitive to toxins and, in proportion to the quantities of unneutralized toxins, reacts more or less in the form of an irritation, being most marked in the stomach and thus causing secretory and, gradually, motility disturbances and resulting derangements in the mechanism of duodenal regurgitation. All of these factors are causative or contributory in preparing the soil for the formation of erosions or ulcers in the stomach and duodenum. Time and further investigations on a large scale will no doubt prove or disprove this new interpretation of Dr. Jarno.

The fact that, according to some surgical authorities, success in stomach surgery for ulcers seems to hinge upon a procedure which facilitates the mechanism of duodenal regurgitation into the stomach and thus enables the bile and pancreatic secretions to perform their physiologic function, seems to prove Dr. Jarno's contention.

According to Kleeblatt's³ experiments made on animals, ligating of the common bile duct was always followed by the formation of a duodenal ulcer, so that he considers the bile of the duodenal contents not only as a protective, but also as a healing agent in an ulcerated stomach.

The good results we are obtaining from the Sippy diet, based on empiricism, are due partly to the ingestion of relatively large quantities of cream-fat (given in small portions)—elements of food containing lipoids (lecithin and cholesterol)—thus contributing to the increase of blood cholesterol. In support of this contention the author refers to the experiments made by different investigators with herbivorous animals (guinea pigs, rabbits) and carnivorous (dogs). By feeding the herbivorous animals with cholesterol, they were able to raise the blood-cholesterol level (Rothschild), but not so in the carnivorous dogs, unless they combined the cholesterol feeding with fats (Weltman).

Another factor contributing to the good effects from the frequent introduction of the cream-fat into the stomach is derived from the way the stomach acts in the process of fat digestion. Cannon has shown that fats slow the emptying time of the stomach by inhibiting the production of acid and thus relaxing the pylorus. This relaxation facilitates the mechanism of duodenal regurgitation, and with it the alkaline pancreatic secretions and the bile enter the stomach more freely (Boldyreff),⁴

where the bile acts partly as an antipepsin and partly as a healing agent to the ulcer. This phase of the gastric function is of added importance in considering the provisions of frequent feeding in the Sippy regime. Therefore these two factors: frequency of feedings and relatively large quantities of fat, given in small portions, must always be taken into consideration when selecting any diet for ulcer cases.

Cholesterol Estimation

The normal quantity of cholesterol varies between 0.15 and 0.20 percent, colorimetrically estimated; but, considering that colorimetry is a somewhat complicated method and, at best, depends on subjective impressions (therefore not being exact), I selected the chemical method recently published by Suranyi and Korenyi³, which gives, by a simple technic, more exact pathologic values of cholesterol determination, and can be used in the private office.

The principle of the method is based on the fact that an alcoholic cholesterol solution of a certain concentration is precipitated by distilled water, but the precipitated cholesterol can be redissolved by the addition of more alcoholic cholesterol solution.

Since there is a certain uniform relation, according to these authors, between the quantity of added alcoholic cholesterol solution necessary for redissolving the cholesterol precipitate and the different concentrations of alcoholic cholesterol solutions, the authors prepared a whole range of standard cholesterol-alcohol solutions of different concentrations in order to gauge the results of blood cholesterol determinations. All that is necessary is to read from the tabulated index the percentage of the blood cholesterol solution corresponding to the added quantity of alcoholic blood cholesterol solution and the determination is made.

Conclusions

1.—We have found, in our series of cases of gastric and duodenal ulcers, decreased values of blood-cholesterin.

2.—Oral administration of cholesterol and bile, in combination with a diet rich in fats, increased the cholesterol contents of the blood and improved the mechanism of gastric function.

3.—While it is too early to draw definite conclusions from a study of but few cases, the clinical improvement was so marked that the cholesterol and bile treatment of all our gastric and duodenal ulcer, and even hyperacidity cases, is warranted.

4.—Since a vigorous adherence to a starvation diet or confinement to bed is not essential, except in serious complications, the cholesterol and bile treatment may offer advantages in the field of curative and preventive applications of internal medicine and surgery.

5.—An etiologic relationship between hypocholesteremia and gastric and duodenal ulcer is not yet definitely established, but the evidences at hand are very suggestive of cholesterol playing an important part in the bio-pathologic process governing the development of those lesions and serve to focus attention on biochemistry as the logical method of approach for the solution of the problem.

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Congress on Medical Education and Hospitals

Reported by **GEORGE B. LAKE, M.D., Chicago**

SOMEbody has to be responsible for methods and procedures in medical education and licensure and for hospital administration, and the Council on Medical Education and Hospitals, of the American Medical Association, is charged with these duties. Each year they call together the deans of the various medical colleges, professors and other prominent men, to talk things over.

The meeting this year was held at the Palmer House, Chicago, February 6, 7 and 8. Surgeon General Ireland, of the Army, Rear Admiral Stitt, Surgeon General of the Navy, Surgeon General Cumming, of the Public Health Service, Sir Norman Walker, of England, Dr. Jabez N. Jackson, President and Dr. Wm. S. Thayer, President-Elect of the A.M.A., as well as many other notables were in attendance.

Some of the papers and discussions dealt with matters of a highly technical nature and were of interest chiefly to medical educators and examiners, but a number of matters were considered which are of importance to all physicians. I shall try to give brief resumes of what was said on these subjects.

Modern Preceptorships

By Dr. Charles R. Bardeen, Dean, University of Wisconsin Medical School, Madison

We must return to the preceptorial teaching of medicine by practicing physicians.

At the University of Wisconsin we now give three years of regular conventional teaching and one year of direct, extramural, clinical teaching, under carefully chosen preceptors who take only three or four students at a time. These undergraduates work directly under the close personal supervision of their preceptors in the examination and handling of patients,

in hospitals and in private homes, and thus get a true idea of a cross-section of general practice.

The students are well pleased with the arrangement. They get four "quarters" of twelve weeks each, divided between various types of work: they take histories and make examinations, which are later checked by the preceptors; they see the simple conditions which they will meet in general practice, but which are rarely encountered in hospitals and not frequently in clinics; and they learn to meet and handle patients, as physicians.

The preceptors, too, are pleased and we feel that this externe service is an excellent preparation for the internship which is to follow.

Discussion

By Dr. Karl Doege, President-Elect, Wisconsin State Medical Society, Marshfield

I have been one of the preceptors for the university students, and I find that we must go over our stock of knowl-

edge and bring it up to date, in order to meet these young fellows. We must be more careful, guarded and accurate in our speech.

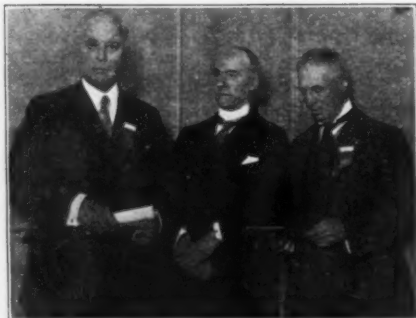
I have found the students well prepared in their basic science work, and this preceptorial instruction permits them to learn something of the art of medicine. "Art means heart," and the apprentice needs some soul-stuff in his practice. This is more valuable than clinical work in a hospital, where too much emphasis is placed upon laboratory work.

If preceptors can be developed into real clinical teachers, they will be able to give short postgraduate courses for practitioners, under the direction of the medical colleges.

Coordinating Clinical Teaching

By Dr. J. S. Evans, Prof. of Medicine, University of Wisconsin Med. School, Madison

The present tendency is to teach the various specialties well, but not to coordinate



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Attending Celebrities.—Left to right: Dr. J. N. Jackson, President, A.M.A.; Sir Norman Walker, London; Dr. Wm. S. Thayer, Pres.-Elect, A.M.A.

them. The student has good *bits* of knowledge in a vacuum of ignorance. Specialism is necessary, but we must remove the barriers between the specialties and give the student a larger view. Specialization must come only after several years of general practice and postgraduate study.

A combined course like this requires unity of opinion among the teachers. The student must be taught *principles*, not details. He must learn the handling of patients and the importance of sociology, nutrition, endocrine disorders, psychic factors and general disease physiology.

Clinical clerkships are helpful, where the student records histories and diagnostic impressions. Class conferences, participated in by several instructors, are preferable to didactic lectures. Repetition is necessary in medical teaching. Outside reading should be suggested.

The Outpatient Department in Medical Instruction

By Dr. Irving S. Cutler, Dean, Northwestern Univ. Med. School, Chicago

The outpatient department offers a cross-section of medical practice, and if conducted by good teachers, with adequate equipment, it can handle ninety-five percent of clinical undergraduate instruction.

The best men (professors) are needed here. Young, untrained men are not satisfactory teachers. A full-time, graduate fellow, on a proper salary, should be in general charge, and the equipment should be as complete as that of a modern hospital.

Here the student sees the *beginnings* of disease, not the end; handles patients and learns the human side of medicine; develops resourcefulness and learns to do rapid and accurate work without leaning on the laboratory; and comes to appreciate the importance of therapeutics.

It is valuable for the teachers, as well, for they learn to teach. The students must be made to solve their own problems, while the instructor merely steadies them and keeps them from wandering too far on a wrong trail.

Research and Library Facilities in Hospitals

By John E. Ransom, Supt., Toledo Hospital, Toledo, O.

All hospitals are, to a greater or less extent, teaching institutions, but, officially, only those which are directly connected with medical schools are listed as teaching hospitals, and there are but 316 of these.

If the so-called non-teaching hospitals, of which the Toledo Hospital is a rather typical example, are to fulfil their duties to the communities which they serve they must be something more than boarding-houses for sick people—they must not become absorbed in the routine cares and duties, plans and budgets, but must make serious efforts to encourage professional progress by the members of their staffs.

Every hospital of any size should become a center for scientific and coordinated research work, but this will require active interest and cooperation by executive officers, who must furnish the requisite space, funds, materials and services for animal surgery, physiologic

experimentation, and other laboratory procedures. The members of the staff must be keen for it, also, or the business office will never become enthusiastic.

In order that any satisfactory, scientific laboratory or clinical research may be undertaken, the hospital must employ a thoroughly competent, full-time pathologist, who is able to undertake the prosecution of such work, as well as to carry on the routine examinations required by the hospital. There must also be intelligent cooperation by the roentgenologist. The worker must be able to define his problem accurately before he can profitably set about its solution.

When one man begins to do work like this the thing becomes contagious, so that others are soon engaged in it. The fame of the institution soon spreads and the best men in the community will be attracted to the staff, in order to have their part in the advancement of medical science and practice.



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Three Surgeons General.—Left to right: Maj. Gen. M. W. Ireland, Army; Rear Admiral E. R. Stitt, Navy; Gen. H. S. Cumming, Public Health Service.

When the news leaks out in the community it will draw more patients; more autopsies will be easily obtained when people know that they will be used to good purposes; the clinico-pathologic conferences will be more interesting and better attended; the abundant material which every hospital has at hand will be well worked up; and thus a cumulative beneficial effect will result.

It goes without saying that, for an effort of this sort, a good library will be required, suitably housed and with a reasonably capable librarian in charge, to assist in reference work. A file of the Quarterly Cumulative Index Medicus will be indispensable and a considerable number of standard medical journals must be available and must be filed for binding. Arrangements can be made with the larger libraries for the exchange or loan of books. A hospital museum is also vastly helpful.

Classification of Nurses and Nursing Schools

By Dr. M. A. Burgess, New York City

The committee appointed to grade and classify training schools for nurses is now at work, but at the beginning of our labors we found things in such a chaotic state that we have first had to set about the establishment of standards, before any classifying can be done.

The nursing profession must take stock of its own membership and set about housecleaning from within, as the medical profession has done. It seems now as though many young women are admitted to nursing schools because they are strong and able to work, so that they will make helpful *student* nurses in the hospitals, without much regard to how they will function after they are graduated and sent out on their own resources.

The really good nurse, who has been graduated from a high school and well trained, can hold her own anywhere, and about equal numbers of them will be attracted to public health work, institutional service and to private duty. The girls who could not or would not go through high school will be trained in the inferior nursing schools, and when they go out they will not be accepted for the public health service nor by reputable institutions, so they almost all go on private duty. It is these nurses with whom doctors and patients come into most frequent contact, and it is

not strange that unfavorable impressions frequently result.

Between the two extremes are all grades of competence. Many of these women work well under supervision. It therefore behooves the training schools to exercise some supervision and leadership over their graduates during their early years in the profession.

Nursing service needs to be reorganized to fit it to the needs of the community. Standard hours, duties and fees are out of line with the times. Many varieties of nursing service are needed. There must be specialization.

A nurse who is a thoroughly competent specialist in pneumonia or heart cases, for example, might command, and *be worth*, twenty dollars a day. Less able women could look after mild—especially long, chronic—cases, where little more than oversight and companionship are required, for three dollars a day, perhaps, when they could not command a standard daily fee of seven dollars. The younger nurses should start in at smaller fees, until they gain experience.

Some patients need constant care for a few days; others need only one hour's attention daily. Nursing service for any period needed—one, five, eight, twelve, twenty-four hours—should be available. The registries must classify the nurses and provide such service.

There is now a considerable over-production of nurses—except in the small communities—and yet all the nursing schools have long waiting lists. Even so, it is difficult to get a nurse for a house case, an out of town call, or for contagious or mental cases. Scarcely any of them will go out during the holiday season, even when they have had no work for weeks. This is all wrong.

The nursing profession needs:

- 1.—Help in "cleaning house"—to eliminate the really poor ones and utilize the fairly able members to the best advantage.
- 2.—Means for keeping undesirable material out of the schools.
- 3.—Adequate supervision and leadership for the younger nurses.
- 4.—A more flexible type of service.

Physicians should take time to give assistance in these matters—such as reporting on nurses when requested to do so by competent authority—and should give the facts wide publicity in the profession.

Symposium on Autopsies

Dr. Harvey Beemis, Professor of Physical Diagnosis, Detroit College of Medicine and Surgery

Dr. Christopher G. Parnall, Med. Director, Rochester General Hosp., Rochester, N. Y.

Dr. Elexius T. Bell, Professor of Pathology, University of Minnesota Medical School
Dr. Frederick C. Smith, Marion, O.

Dr. Howard T. Karsner, Chairman, Div. of Med. Sciences, National Research Council

A community profits by the added keenness in diagnosis and general efficiency on the part of its physicians which come from frequent checking of clinical diagnoses by the findings at autopsy.

Families should be taught the importance of knowing the exact cause of death of their various members. This knowledge may prevent suffering or even save life, in certain cases. The presence of heritable disease is always an important matter. An active propaganda regarding the value of autopsies should be undertaken.

Too often the executive officers of a hospital are indifferent to the work of the medical staff. The superintendent becomes an executive office clerk and a glorified housekeeper. The ideal hospital executive should be a *medical director*. The staff should be a working unit, functioning harmoniously and without friction.

The number of autopsies performed in a hospital is an index of the scientific attitude of the staff. Few autopsies shows lack of coordination.

Hospitals doing many autopsies are the best places for internes. In such institutions good records will be kept, the clinicopathologic conferences will be interesting and well attended and the patients will be better cared for.

An autopsy should be held upon every patient that dies in a hospital; and failure to secure an autopsy should call for an explanation from the attending physician and the members of the house staff. Staff physicians who cannot obtain autopsies should be replaced by those who can. The laws should be changed so that a postmortem examination may be held on every patient dying in hospital, unless specifically forbidden, in writing, by the family. No death certificate should be legal unless the cause of death has been confirmed by autopsy.

In order to have a satisfactory autopsy service there must be a chief resident physician, who will act as executive secretary to the staff. He should secure permission for autopsies and make all arrangements, working out a definite scheme for cooperation with undertakers and for sending prompt notice of such operations to all members of the staff. Undertakers can be brought to cooperate, if the prosector will be careful not to cut vessels unnecessarily and will instruct them in the proper way to embalm a body after a postmortem operation. It is *not* difficult, if one knows how.

A competent, well trained pathologist must be on a full-time basis or prepared to come to the hospital at any hour of the day or night to perform an autopsy. In addition to being thoroughly familiar with normal and pathologic tissues, he should possess sufficient teaching ability to demonstrate them to others. Adequate and well-arranged space and complete equipment for this work must be available.

Autopsies must be made as soon after death as possible and the bodies turned over to the undertaker promptly. All autopsies possess instructional value; not merely those on rare or doubtful cases, and the members of the resident staff should vie with one another in securing them.

Much of the popular horror of postmortem operations is due to the ruthless methods of some pathologists. Every body should be handled as one would want the mortal remains of one's loved ones treated—with gentleness, reverence, neatness and decorum. No incisions which will show when the body is dressed should ever be made. The public must be assured that their dead will be treated thus and must be instructed as to the value of autopsies.

A number of hospitals have made an arrangement whereby, when a physician has secured written permission for an autopsy on a case which dies outside, the body may be sent at once to the hospital, where the pathologist will do the postmortem at once, without charge, but with the provision that any interesting material disclosed is to become the property of the institution. In the University Hospital, Minneapolis, 1358 autopsies were done in 1927. This represented 19 percent of all persons who died in the city.

The chief difficulty in getting abundant autopsy material is the indifference of many physicians to their value. Some seem to fear exposure of their mistakes, but the

sound and progressive man is eager to learn by his errors. The pathologist, however, must not "slaughter" the clinician. Many never ask for an autopsy; while others get them on 80 to 90 percent of their fatal cases. It is the attitude of the physicians themselves which counts most, and if all the good men in a community request postmortems on every case ending in death, the community will soon come to expect it. Autopsies could now be obtained for the asking in 20 percent of all cases, and this could be increased to 90 percent with reasonable effort.

No procedure should be properly called an autopsy unless the thoracic and abdominal cavities are opened and *all* organs carefully examined. If clinical signs point in that direction, the brain and spinal cord must also be studied. All tissues showing macroscopic changes must be subjected to laboratory examination.

It must always be borne in mind that an autopsy is primarily for the benefit of the *clinician*. The pathologist with a superiority complex has no place in the scheme. A postmortem study should include a complete history of the case and all the antemortem clinical records, so that the changes found at autopsy can be correlated with the physical signs present during life. Some diseases, such as a fatal acidosis, show no pathologic changes after death.

The autopsy is the keystone of scientific medicine. All outstanding leaders in medicine know this. Without autopsies we would have no science of pathology; and without pathology clinical medicine would be blind empiricism.

Professional errors are least where autopsies are most frequent, and if all physicians would take a proper attitude in this matter the healing cults would promptly die of inanition.

The Therapeutic Use of Fresh Orchic Emulsion*

(A Preliminary Report)

By A. M. BENNARDI, M.D., Cleveland, Ohio

Urologist to Glenville Hospital

INVESTIGATION and not gullibility should be the method of choice before we pass judgment on a particular innovation. The practice of modern medicine does not want "believers". Blind rejection of the new tends to stagnation, while inquiry establishes or disproves. I feel it my duty as well as a pleasure to offer a suggestion which may be of interest to the profession.

My sincere desire to have others voice an opinion concerning this matter was encouraged by the article on "The Technic of Medical Writing", which appeared in the March, 1927, number of *CLINICAL MEDICINE AND SURGERY*. To quote from that article: "If an individual has something of interest, the profession is entitled to be put in possession of this knowledge. New methods are established and old ones modified by

the combined experiences of all the men who are using them; but these experiences can be utilized for the advancement of medical art and science only to the extent that they are made available for study by publishing results in the current medical periodicals." It would seem, therefore, that every physician should follow this sound advice when he has something of probable benefit to others.

Technic of Preparation

The preparation I wish to present is the extract obtained from healthy rams' gonads by the action of glycerine. The method of preparation is as follows:

Fresh testicles of the ram are obtained at the slaughter house at the time of killing. These are carefully trimmed of all extraneous matter, only the glandular tissues being used; washed in three or four rinsings of physiologic salt solution; and cut into very small pieces.

*Read before the Glenville Hospital Staff, September 6, 1927.

To each 1000 Grams of the minced glands, 250 cc. of glycerin are added and the mixture placed on a water bath and heated, at a temperature of 120°F., for about 45 minutes and then the mixture is expressed. One tenth of one percent sodium benzoate and 5 percent tincture of vanilla (essence of lemon or peppermint or other flavoring may be used, if desired) is added and the mixture is bottled immediately and stored in a cool place. It will keep, in good condition, for several months.

In the light of present medical progress, the traditional conception of the value of orchic extract in certain diseases is in need of revision. Unfortunately, its efficacy was exaggerated, by many, *ad nauseam*. Quacks, charlatans and cults of various types, with the easily purchased aid of cheap and unscrupulous newspaper sensationalism, have reaped a harvest, and are continuing to do so, from the credulous and unsuspecting public. Its use naturally fell into disrepute and physicians laughed when asked as to its possible merit. That pessimistic attitude still prevails.

The main object of this paper is to emphasize demonstrated clinical facts. I cannot explain exactly the manner in which this preparation exerts such gratifying results, and it is impossible at present to determine accurately its mode of action by means of our present laboratory armamentarium. We must as yet be guided by clinical observations.

Endocrine Function of the Gonads

Health preservation depends on the perfect union of the internal secretory glands, and, since they are dependent on each other, the upset of one disturbs the action of the others. In recent years our knowledge as to the physiology of these glands has developed, and there is no longer any doubt, in the minds of those that have given this subject attention, that the future of the proper culture of the human body lies along these lines.

That the gonads powerfully influence the organism at large, is well shown by the fact that castration before puberty modifies, in many particulars, the development of the individual. The characteristics of infantilism are preserved to a great extent, the skin remaining soft and white, the muscles flabby and weak and the voice high pitched. Such an individual lacks courage, animation, initiative and intelligence. It is evident, therefore, that the gonads perform

a function not solely genital. Brown-Séquard taught that their internal secretory function stimulates and sustains the energy of the central nervous system.

The prevailing opinion at the present time is that the beneficial effects obtained from a properly prepared orchic extract are due to nuclealalbumins—substances that are rich in phosphorus. Bodansky's latest researches on carbohydrates indicate that phosphorus is, in some way, intimately concerned with the sugar-splitting process. This explains the results when this emulsion is given to patients suffering from diabetes mellitus.

The isolation of spermin phosphate, in 1878, by A. C. Schreiner, in the gonads, thyroid, thymus, spleen, ovaries and pineal gland, is further proof that these highly specialized and important organs are interdependent. A. Poehl has elaborately studied this product, and found it in both male and female reproductive organs. A. Gantier concluded that spermin phosphate possesses most valuable functions in connection with the varied activities of living beings. Howard Kelly, of Baltimore, recommends it, as a powerful physiologic tonic in all kinds of depressed conditions. It increases the nitrogenous excreta of the kidneys; improvement of the force and regularity of the heart is noticed; respirations are fuller and more regular; it increases bodily resistance to disease; visual and mental power are increased.

The key to the real mystery of a number of pathologic conditions, especially the etiology of goiter, is yet to be discovered, but, among the more solid theories for the production of this disease, the thyrogenital explanation should receive more attention than it has in the past.

The responsibility for the development of the idea of this preparation is my own; while the credit for the chemical experimentation, until the present perfect emulsion resulted, with all the active principles preserved, is shared by a pharmaceutical chemist.

Studies in this particular phase of glandular therapy have just begun. That it has proven of great benefit in many functional disorders is best shown by the fact that the following conditions have been treated symptomatically with good results: adenomatous goiter, diabetes mellitus, anemia, oligospermia, cachexia of various types, asthenia and neurasthenia, general

debility and suboxidation, functional impotence, sexual neurosis, premature old age, low blood pressure, insomnia, irritability, melancholia and slow convalescence following severe illnesses. In all of these, nutritional improvement was indicated in the return of the intellectual and physical vigor, increase in weight and increase of the blood count.

I am conscious of the fact that time, and experience by many members of the profession, must give the final answer. Thus far, those who have used orchic extract have had success with it in cases such as those reported.

The subcutaneous administration of this emulsion is dangerous, as glycerin has toxic properties when given by this method. It is always to be given by mouth.

Case Reports

Case No. 1.—Mr. H. C., age 56, white, widower, manager of a large office building, weight 141 pounds, height 5 feet 6 inches. I first saw him April 21, 1926.

Family and Personal History: Negative. Denies urogenital diseases and excessive use of alcohol.

Chief Complaints: For last ten years felt that he was losing strength; migraine from time to time; loss of appetite and dyspeptic symptoms; increased frequency in urination; shortness of breath; insomnia; tires easily; visual disturbance for which he was advised to wear spectacles. He consulted me primarily for the polyuria.

Physical Findings and Laboratory Study: Urinalysis showed low specific gravity, slight albuminuria, diminished output of chlorides (6.0 Grams in twenty-four hours); blood pressure, systolic 207, diastolic 95; Wassermann test, negative (from two dependable serologists); temperature 98.6°F.; pulse rate 70.

He was given the glandular emulsion, on the strength of his asthenia, with usual instructions; i.e., a tablespoonful in half a glass of water on arising and on retiring.

On May 4, 1926, he reported increased tolerance for work; increased appetite and enjoyment of food; no longer tires; sense of cranial fullness gone; feels much stronger in every respect; sleep is refreshing; enjoys company of his associates. Blood pressure reading, October 7, 1926, showed a decrease of 7 mm. systolic. I attach no significance to such a reading.

The points of interest in this case are the increased urinary output of ammonium, potassium and sodium chloride (9.5 Grams per day) and the bodily and mental comfort this patient received.

Last consultation, July 22, 1927. His condition was quite satisfactory, considering the state of his kidneys. For past six months he has been taking a tablespoonful of the emulsion every three or

four days. I fully appreciate the grave prognosis in an advanced case of cardiovascular-renal sclerosis.

Case No. 2.—Mrs. M. R., Russian Jewess, mother of two children both living and well. Age 49, height 5 feet 5½ inches, weight 148 pounds. First consulted me July 3, 1926.

Family and Past Personal History disclosed nothing of importance. Menstruation at thirteen, regular as to periodicity and quantity up to age forty-seven, when menopause was established with little or no disturbance.

Chief Complaints: Very irritable; feeling of utter exhaustion on arising in the morning; slight impairment of memory; anorexia; constipation; fine tremor of hands; dull ache in small of the back and limbs; insomnia; blurred vision; sweats easily; precordial pain.

Complete Physical Examination: usual laboratory tests, including two Wassermann tests; x-ray study of genito-urinary tract and teeth; cystoscopy and kidney efficiency test, resulted negatively, with the exception of slight blood-urea retention.

Diathermy, tonics, rest treatment, etc., gave no benefit. The objective and subjective symptoms pointed to functional exhaustion and irritability of nerve centers—"neurasthenia."

I was quite eager to prescribe the emulsion and notice effects, if any. On July 29, 1926, results obtained were quite surprising. I decided to decrease the dosage to once a day and, a week later, to miss a day.

The patient is still enjoying splendid health; arises much earlier, with a feeling of refreshment; dull pain in sacro-lumbar region entirely gone; does her own housework without tiring; enjoys company of friends; feeling of complete composure and disappearance of tremor.

This patient came to see me August 11, 1927. She had no return of previous symptoms and is pleased with her physical improvement. She uses a tablespoonful of the emulsion now and then before retiring. Here is a case where heterologous glandular treatment gave excellent results.

Case No. 3.—Mr. T. Mc., age 47, white, married, attorney at law, weight 146 pounds, height 5 feet 7 inches. The patient was first seen May 10, 1926.

Family History revealed nothing of importance. Denies diseases of urogenital tract and excessive use of alcohol.

Chief Complaints: About two years ago noticed that he was unable to keep pace with his usual amount of work; felt very tired about 3:00 or 4:00 P.M., when somnolence would come on and he was obliged to return home. He religiously obeyed his various medical advisers but his condition remained unchanged—chronic headaches; feels tired on arising; since 1923 his sexual power has steadily diminished.

Physical Examination: Disclosed nothing of immediate importance, except a slight

paranchymatous prostatitis. There was no sign of any active, organic disease.

Laboratory Report: Blood pressure, systolic 115, diastolic 90; blood count, red cells 3,700,000, white cells 7,000, hemoglobin 85 percent; Wassermann tests, negative (from two different laboratories); temperature 98.6°F.; pulse rate, 85 and weak—after two minutes of mild exercise, 95; uranalysis showed nothing of clinical interest.

A provisional diagnosis of functional impotence was made; subsidiary, moderate hypotension with marked asthenia.

On May 20, 1926, the patient was instructed to take a tablespoonful of the orchic emulsion at bedtime and on arising, in half a glass of water. No other treatment was instituted, and he was told to continue his mode of living in the usual way.

I saw him next on May 26, 1926, when there was a complete change in the clinical picture. He felt better in every respect, was sleeping soundly and engaging in his daily routine with willingness. The most interesting finding in this case was the blood pressure reading. About eight days after beginning treatment, the systolic pressure registered 130 and has continued to remain within normal range up to his last visit, June 19, 1927.

The last blood count showed a reading of over four million reds and an increase of two thousand in the white count. Return of *potentia coeundi* and a surprising increase in the expelled semen are worthy of note. Has gained six pounds in weight since his first consultation. This case looks very much like a pluriglandular disturbance—in all probability a hypoadrenalism.

Case No. 4—Dr. A. G., age 55, height 6 feet, weight 180 pounds, in general practice in a town of twenty thousand.

His general condition was below par. He assured me that all the physical, chemical and clinical findings were negative, with the exception of the blood pressure reading, which was 185/100. He looked older than fifty-five to me. I would say he looked seventy years of age. An uncontrollable tremor of both hands was noticed; gait steady; mental attitude, normal.

This case was not studied routinely. I informed him of this glandular preparation, and suggested that he try it and see if any improvement would take place. His last letter, dated August 24, 1927, informed me of his continued sense of well being. His office work is no longer bothersome or tiresome. He feels well; sleep is undisturbed; and he does light work with ease. I am inclined to diagnose this case as premature senility, with cardiovascular-renal sclerosis.

Case No. 5.—Mr. A. S., age 40, weight 161 pounds.

Family and Past Medical History of no clinical importance, save mumps when eighteen years of age, which left him with an atrophic left testis. Date of first consultation November 5, 1926.

Chief Complaints: Extreme nervousness; is unable to indulge in any competitive game without sweating profusely, especially about the forehead; marked tremor of hands; forgets recent events; muscular weakness; is unable to enjoy sleep—gets up on the average of once a night and tries to read for an hour or more with the hope of tiring himself out; often experiences a state of disorientation while walking about; is greatly worried over his condition.

On inspection I discovered a unilateral enlargement of the right lobe of the thyroid. I immediately turned him over to an internist for further study. His diagnosis was: Congenital adenoma of the thyroid, with "neurocirculatory asthenia." Basal metabolism was within normal range; other tests of no special interest. Wassermann test, negative.

The patient was given orchic emulsion on the strength of the subsidiary diagnosis. Improvement was noticed in three days time. He completely relaxed, enjoys sleep and sense of general tonic effect was noticed. March 6, 1927, he attended a boxing match, the excitement of which produced a mild relapse of his "angioneurosis." Began taking glandular substance again and there was an immediate subsidence of symptoms.

This case needs surgical treatment, but the symptomatic improvement is of great interest. This is a typical case of ductless gland disease. The administration of this simple emulsion proved of value, beyond doubt. A thorough trial as a preoperative medication in thyroid disease may show that it is of value in such cases.

Case No. 6.—Dr. H. P., age 34, weight 147 pounds; complained of asthenia and utter exhaustion. Four years ago he was bedridden on account of active tuberculosis, but made a very satisfactory convalescence. Since returning to active, specialized practice he began to experience marked weakness and a slight neurosis. This was quickly relieved by the glandular emulsion, taken in the regular manner. First consultation, October 10, 1926; last saw him July 20, 1927. He is still enjoying good health.

A number of other patients have shown gains in weight of from 10 to 15 pounds, over periods of several months, with increase in the red blood cells, favorable effect on the blood pressure (rise or fall, according to the case) and marked improvement in the general condition and subjective symptoms.

Endocrine Therapy or Surgery?

How does this glandular product compare with Steinach's or Voronoff's surgical measures to induce "rejuvenation," in either the male or female?

To begin with, the conditions are not parallel, hence the futility of trying to establish a criterion for comparison.

Splendid results have been obtained by both these surgeons; but let us not lose sight of the fact that very few surgeons have their sound judgment as to when to operate. The technic of Voronoff is not easily copied. Steinach's operation, on the other hand, is comparatively simple. But proper ligation of the vasa deferentia to induce a retrograde, compensatory hypertrophy of the interstitial cells, or cells of Leydig, spells sterility for the patient.

The benefit obtained by successful surgery is of short duration—four months to two years, at the most—and few individuals would consent to a second operation.

Let us remember, too, that this particular surgical treatment has a very limited field. It is expensive and uncertain; danger of infection is always present; it inconveniences the patient, regardless of his ability to secure hospital care.

The word "rejuvenation," by the way, is both misleading and confusing. There is no such thing. Yet, human experience seems to bear out the fact that there is no fixed law as to the duration of virility, and that it is within the bounds of scientific possibility to delay the time of its loss, as has been clinically demonstrated in many cases, including some of ours. But so long as men and women continue to laugh at temperance, vanity and premature old age will always clash, with the result that some thoughtless individuals will embrace the many health cults and fads and continue to chase the will-o'-the-wisp of a return to the power and vigor of youth.

Conclusions

1.—Accurate diagnosis between organic and functional disease is essential.

2.—This preparation seems an interesting innovation and of decided value when prescribed intelligently in appropriate cases.

3.—Phosphorus, in organic combination, is probably responsible for the improvement noticed in most cases, spermin phosphate being the active factor.

4.—Our chief concern is to help the sick; and, if experience and clinical evidence teach us certain facts, it is our duty to utilize them, when needed, even though empirically.

5.—A word of caution is needed against the senseless and irrational administration of this or any other glandular product in conditions that call for a surgeon's skill. But we must be on guard to minimize the number of cases that go from internist to surgeon and from neurologist to physical therapist, when, in reality, their need is for endocrine therapy.

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461 Rose Bldg.

Acne Vulgaris

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IT has become the custom to inform a patient suffering from acne vulgaris that it is a simple ailment, that so many young people suffer from it that it may be regarded almost as a part of adolescence, and that, when a certain age is reached, it will disappear anyway. When we had little or no beneficial treatment to offer, probably it was well to advise the sufferer to bear the affliction. Today we have a

fairly sure and satisfactory treatment and there seems little justification for neglecting to employ it.

In life there are many things that are transient and for which time brings relief. Dirty face and hands and uncombed hair are not fatal afflictions, still, everyone gives considerable time and energy to treating them, solely to make their persons more acceptable to those with whom

they associate. Acne vulgaris is not pleasant to see. It leads to embarrassment and timidity on the part of the developing individual and in many instances these characteristics become moulded firmly into his individuality and are a serious handicap throughout life; or the young woman or man becomes callous toward his associates and his character is warped in that direction. Aside from these lasting effects, upon the person's character, we have seen youths drop out of school, avoid companions, or become recluses rather than be embarrassed by the comments about their looks.

In those cases where the lesions become considerably purulent there is apt to be more or less permanent pitting. In addition to these matters is the little-understood truth that the occurrence of acne vulgaris indicates bodily ill health, so that the physician who urges tolerance toward it is not adopting the most justifiable attitude.

Judging from what we hear and read, there is some confusion as to what clinical and pathologic entity is to be described as acne vulgaris. Not all papular and purulent lesions upon the face during adolescence are truly connected with this disease. There are, at times, lesions associated with acne which are complications, and we have seen physicians confused by trying to account for such lesions as a part of the clinical picture. I shall endeavor to give as plain a presentation of the subject of acne vulgaris as is possible.

The Lesions of Acne

Acne is a disease that occurs and persists during adolescence. The affection is usually confined to the face, sometimes extending to the neck and back. On the regions affected there are comedones, red papules and perhaps pustules, scattered without regularity, the individual lesions altering constantly and from day to day.

The comedones are due to the unhealthy activity of the sebaceous glands. True comedones appear as small dark spots, sometimes surrounded by apparently normal skin; at other times they are slightly depressed below the level of the skin; and in other instances the black dot is surrounded by a papule. Properly applied pressure causes the extrusion of a column of white, wax-like material, on the outer extremity of which is a darkened segment. Formerly we have heard these extruded comedones called "flesh worms," due to

their shape and motion during their extrusion.

The papules are of several types. Palpation reveals rounded, indurated lesions, covered with normal-colored skin. Properly applied pressure will cause the appearance, from one or several openings, of columns of sebaceous material similar to those seen in comedones. These papules are rather deeply seated, grouped sebaceous glands, which have accumulated their secretion until it formed a mass. In some cases these grouped glands communicate and considerable subcutaneous tunnels are present. Our experience is that, in those cases where this type of lesion is marked, there is apt to be rather more scarring than in other cases.

There are red papules, usually surrounding impacted comedones, or at the site of infected follicles. These are the result of irritation due to the retained sebaceous matter and probably also to infection by pyogenic bacteria. These lesions are most apt to occur in patients who, more or less constantly, squeeze and pinch their faces with dirty fingers.

The activity of infecting organisms converts a varying number of the papular lesions into pustules, which are usually filled with creamy white pus, but may be filled with yellow pus.

It is almost always possible to discover some very prominent comedones in the concave surface of the external ear.

In a well marked case, treatment which causes extrusion of the sebaceous matter and allows it to accumulate as the treatment progresses until there is a considerable amount upon the surface, makes it possible to recognize the characteristic odor, which is a peculiar, rancid, oily smell. An experienced operator is able to diagnose a case of acne vulgaris from this odor alone, without further examination.

A peculiarity of the comedones upon the back is their bluish-black color and the fact that they do not present as small, round dots, such as those seen on the face; but rather as small, irregularly-shaped, subcutaneous spots. These comedones are quite different from the papules seen in adults who allow their follicles to become impacted with debris, dirt and oily substances; and, while sometimes spoken of as cases of acne, must not be confused with acne vulgaris.

The above are the diagnostic and essential lesions present in this disease. In addi-

tion there are certain occasional lesions and symptoms that interest us.

Quite often there is redness and either greasiness or exfoliation in the grooves at the sides of the nose. There may be similar erythematous areas on other parts of the face. These are patches of *seborrheic dermatitis*, and in some patients there is a complicating *seborrheic* condition of the scalp. These lesions are not to be regarded as part of the *acne vulgaris*.

I do not know that I have ever seen a patient with *acne vulgaris* who did not have a sweetish, putrid breath. I believe that this depends upon the general abnormal state, but it does not form a diagnostic symptom of the disease under discussion.

Etiology

It is natural for the moods, activities, appetite, and functions of the adolescent to be variable. I have ceased to blame the stomach and bowel or the menstrual function for *acne vulgaris*, but I do regard all these, and also *acne*, as dependent upon the endocrine instability of this period.

In the past it has been charged that *acne vulgaris* indicated masturbation, indiscretions in diet, tobacco smoking, late hours and many other things against which the elders could use this ailment as an argument. While I will admit that dissipation does seem to invite an exacerbation of the symptoms and that, at times, it is easy to demonstrate the connection; still, the slight benefit that can be demonstrated when all the rules of proper hygiene are instituted is very disappointing. We have all been embarrassed at times, after having advised against dissipation, by having a youth institute a nearly perfect hygienic regime without a cure resulting.

The etiology of *acne* is not so well understood as is to be desired. It does not seem to be contagious, nor does it seem to occur with any regularity upon a hereditary basis. It always occurs during adolescence and disappears upon the establishment of adulthood. It never entirely remits, to be re-established. Once completely overcome it does not recur. With these known facts we find various theories developed regarding the etiology. The following seem most acceptable:

We are all born with approximately the same number of hair and sebaceous structures in a square inch of the skin of any particular region. During childhood, the only stiff, pigmented hairs are upon the scalp. All other hairs are of the lanugo

type. During adolescence, probably under the influence of heredity and the endocrines, the hairs in other regions change from the lanugo type to the stiff, pigmented type. In the axillae and on the pubes and perhaps over the legs and arms, these changes occur with regularity, in both sexes. Upon the back and the beard region the sexes show a difference. Boys tend to develop a beard and moustache; their skin tends to lose its fat cushion; it becomes of a more yellowish tinge and shows wrinkles. In the girl, the same skin texture present during childhood persists until the menopause, when it undergoes many of the changes seen in the male.

There must, then, be a conflict, as the boy and girl have an equal number of male and female ancestors. Until the sex glands are developed and control the body, neither inclination is entirely suppressed. During this period of instability the structures are so upset that their functions and resistance are abnormal. The part played by infection, lowered vitality incident to menstruation, fatigue, dissipation, etc., are secondary to the instability of the endocrines.

Economic Considerations

When a patient with *acne vulgaris* consults me, our first consultation is occupied in explaining that salves, lotions, muds, hot towels, etc., can not rationally be expected to correct the trouble, principally because it is dependent upon the developmental stage through which the individual is passing, and because the sebaceous glands lie below the skin and no salve or lotion can be expected to reach them. It is also explained that the treatment is such that only a physician can give it properly and that it will require from one to three months and will be accordingly costly. Based upon my own rate of fees I find that these cases cost the patient from \$40.00 to \$100.00 for adequate treatment.

Having made it clear that there is no use in slight or inefficient treatment, I put it bluntly to the patient whether he cares to undertake the treatment and expense. Without this very clear understanding at the outset I find that there is apt to be misunderstanding when \$10.00 or \$25.00 have been invested.

To be successful in treating these patients it is first necessary to dismiss the idea that there is a routine treatment. Each case and each factor in each case must be properly evaluated by the physician.

Seborrheic dermatitis, if present, demands first consideration. Proper use of mild antiseptics and tonics, with attention to elimination, must be tried.

If a furuncle develops; if a spot of impetigo appears; if Bockhart's impetigo, acnitis or other lesion occurs, each demands recognition and appropriate treatment.

Treatment

Pustules must be evacuated antiseptically; and I usually depend upon the application of an antiseptic soap to hasten their healing. If they are at all a prominent symptom in any case, give the patient a course of vaccine injections, using a rather high count, staphylococcic and streptococcic mixed stock vaccine.

I always make the injection *intradermally* and feel encouraged by a reaction larger than a silver dollar. A failure to secure a satisfactory reaction indicates one of several conditions: The injection was made subcutaneously; it was not of the correct type; or the patient has not sufficient resistance to protect himself against the invading organism.

The sebaceous glands are treated by giving a course of x-ray treatments sufficient to lead to cessation of the comedones and the accumulation of sebaceous matter in subcutaneous, papular masses.

With the patient recumbent and with a good light upon the face, each comedone, pustule and subcutaneous mass is evacuated, using a proper comedone remover. The face is next covered with a lather of mercuric iodide soap, which is allowed to dry for several minutes. The patient then washes the soap and debris away with plain water and the vaccine is given according to the dose schedule.

The patient passes to the x-ray room where, after proper protective lead eye shields and a cover for the thyroid and hair line of the forehead have been applied, the face is turned so that the rays will fall directly upon the areas it is desired to treat. Sometimes this is the chin, sometimes the cheeks, and each cheek must be treated separately. I usually give $\frac{1}{4}$ of an "erythema dose" of unfiltered x-rays each week; however, I prefer to be absolutely upon the safe side and, if there is any reaction or especial irritation of the face from sun burn or medicinal applications, I omit the x-ray for the time being.

It is very hard for patients to under-

stand that safety is the only wise policy with x-ray treatments; and, in a course of treatment that is going to cost between \$50.00 and \$100.00, it is just as well to be cautious, even if it does mean giving smaller doses of x-rays than might be safe at some one treatment.

After the x-ray treatments the patient is permitted to apply such cosmetics as she desires. These treatments are repeated one each week as long as the particular case requires. The patient is cautioned not to use any home treatment, of her own prescribing, but we urge that she secure a comedone extractor and do her best to keep the comedones removed.

Experience seems to demonstrate that flushing of the center of the face aggravates the condition, and we caution the patient not to indulge in condiments, hot broths, tea, coffee, melted butter or lard in any form. We also instruct her that she is to wash her face with soap and water only in the evening, after which she is to apply a bland cold cream. The use of soap removes the normal oils from the skin and nature endeavors to replace it as rapidly as possible, with the result that the skin becomes more and more oily. By applying a cream immediately after the soap bathing we plug each follicle with a protective application and obviate the outpouring of sebum. Filling the follicles with the cream also serves to prevent dust and complexion powders, as well as air, from entering and irritating the deeper parts of these delicate structures.

The patient is advised to avoid both hot and cold water as they both tend to lead to congestion. Lukewarm water does not alter the circulation. In the morning a cleansing with a wash rag and tepid water, omitting soap, is advisable. For cleansing during the day it is best to use a soft cloth to wipe away dust gently. If the patient is employed in a dusty environment it may be necessary to use soap, even with its disadvantages. There is no objection to the use of cosmetics, provided the pores are first packed with a suitable cream.

Pitting

Quite often we are asked as to the probability of permanent pitting. Pitting is due to the destruction of subcutaneous tissues and their replacement by cicatricial material. These small masses of scar tissue contract and draw the skin inward to form the pit. Pitting does not depend

upon the form of treatment but results from the formation of deep pustular lesions. In every case manifesting this type of lesion it is urgent that treatment be instituted, using vaccines, antiseptics and evacuation of comedones.

When pitting has occurred there seems very little that acts to reduce the disfigurement except time. We have been satisfied in some instances with the results following the application of high-frequency electrodes and massage, over a considerable period of time. It is a source of comfort to these patients to note how well nature eventually overcomes this blemish after months or years.

Formerly I employed the applications that lead to peeling, but this treatment was not a rational remedy for acne vulgaris. It had no basis in fact, as such peeling takes place through the stratum granulosum and in no way effects the sebaceous gland structures.

Mechanical massage had its vogue, and today the actinic rays are frequently used. Analysis shows that these are only a means of affecting the two or three most superficial layers of epidermis. Experience has proven their ineffectiveness; and a knowledge of the anatomy of the skin, together with the nature of this disease, shows just how irrational their use is.

The hot towel, steaming and various cosmetic applications have all been experimented with and the results have been disappointing. In the past these various treatments have been employed and, because they have occupied the patient's and beauty parlor operator's minds while time has passed, they have, if used long enough, been given credit for having caused an abatement of the disease. In fact, the patient has reached the time for recovery, unaffected by these treatments.

Vaccine Treatment

Admitting that there has been disappointment to many in the use of vaccine treatment for this affection, we believe that this is due to the fact that the operator expected the vaccine to be a complete treatment for acne vulgaris. It can be expected to benefit only the element of infection, as manifested by pustulation. Those patients with only one or two pustules should not receive vaccine. Those with many and aggravated pustular lesions are more benefited by pushing the vaccine factor of their treatment than by the use of other measures. In fact, in the presence of much pus, we suspend all other treatment until a course of vaccine is given.

We utilize stock vaccines, and choose those with as high a bacterial count as possible. Those composed of mixed streptococci, staphylococcus albus and aureus are our favorites. The site of injection being cleansed, we start with an injection of four minims and at each treatment we increase this by one minim until we are giving fourteen or fifteen minims, when we continue at that dosage several times, the typical reaction gradually becoming less and less.

The vaccine is injected into the skin, not subcutaneously. The development of an area of erythema larger than a silver dollar is desirable, and the most favorable time for the next dose is twenty-four hours after the redness disappears. It is usually necessary to give ten or twelve injections.

The treatment outlined has proven satisfactory and has won appreciation and gratitude seemingly greater than the seriousness of the disease warrants. The medical profession should encourage the treatment of this disease, which undoubtedly causes a considerable amount of mental and physical suffering.

1951 Irving Park Blvd.

I believe that the whole stress in education in America should be changed, and that the study of feelings and emotions may lead to the discovery of methods through which the schools may proceed to minister to the emotional needs of their pupils, as well as they now try to minister to their mental needs.

—John S. Terry

Iodine in the Treatment of Goiter

(A Survey of Medical and Surgical Opinion)

By JAMES H. HUTTON, M.D., Chicago, Illinois

SOME months ago I sent a letter to the heads of the departments of medicine and surgery in the medical schools of the United States and Canada, asking their opinion as to the advisability of adopting, for general use, a simple classification of goiter. In December and January last I sent to the same men a questionnaire regarding the use of iodine in the treatment of goiter. A letter of explanation accompanied the questionnaires, which were sent to 140 men. These letters were written on the stationery of the Scientific Service Committee of the Illinois State Medical Society and read as follows:

"It is realized that this discussion of iodine and goiter covers the field but superficially. If the rank and file of the profession were acquainted with the few facts enumerated here it is believed they would be in a better position than at present.

"Many men feel that the use of iodine is good treatment for some forms of goiter. Being uncertain as to the varieties in which it is useful they give it to all goiter patients, not only as a pre-operative measure but for indefinite periods of time. In these cases it loses its value as a pre-operative measure so that the patient's chances of recovery are minimized.

"Goiter is a very live subject in our society because of the large number of goiters in Illinois, more particularly in that section of the state lying in the Great Lakes Basin. A questionnaire is being sent to the foremost teachers in the United States and Canada in the hope that we may discover a few facts on which the leaders of the profession are agreed which we can pass on to our county societies. For your convenience a 'yes' and 'no' is arranged after each question. If you have the time to go into these questions in greater detail we shall appreciate your attention".

The questions were as follows:

"1.—Do you believe that iodine should not be used as a public health measure in the water supply or in table salt? Yes—No.

"2.—Do you believe that public health agencies should restrict their efforts in the goiter field to educational propaganda? Yes—No.

"3.—That they should explain to the laity that goiter is many times a preventable disease or condition; that many cases can be easily cured if properly treated early? Yes—No.

"4.—That treatment should be left to the private physician who has opportunity to

make a more careful and detailed examination than can or should be made by public health authorities Yes—No.

"5.—For the guidance of the average doctor who sees only an occasional goiter case as part of his day's work, do you believe it would be wise to disseminate the idea that iodine is good treatment only for the diffuse colloid goiter? Yes—No.

"6.—That the adenoma without hyperthyroidism should never be given iodine because of the great danger of converting it into an adenoma with hyperthyroidism (although an occasional case may improve on it and a few may not be made worse by it)? Yes—No.

"7.—That iodine should never be given to the adenoma with hyperthyroidism except when the patient is in the hospital, and then only for five to twenty days, as a pre-operative measure? Yes—No.

"8.—That an adenomatous or asymmetrically enlarged thyroid with hyperthyroidism is always a surgical condition? Yes—No.

"9.—That an adenomatous or asymmetrically enlarged thyroid with hyperthyroidism is one of the most confusing goiters with which the practitioner is confronted because it is so frequently confused with heart disease, nephritis, high blood pressure, and 'nervous breakdown', the presence of a small goiter being frequently overlooked entirely or its relation to the major syndrome being misinterpreted? Yes—No.

"10.—That iodine is of value in exophthalmic goiter only as a pre-operative measure and only on one occasion. That is, while it will cause a remission of symptoms once, it will rarely do so the second time, so that its use should be restricted to the pre-operative period of five to fifteen days? Yes—No."

Answers were received from 59 men. Twenty-three states and three Canadian provinces are represented in these answers. One man felt that too much information was asked for and answered none of the questions. One did not handle goiter cases and so felt himself incompetent to answer. Two believed their experience too limited to permit an answer. This leaves 55 men who returned the questionnaire with answers, which are tabulated below.

Question No. 1—Forty-four men indicated that they were opposed to the use of iodine as a public health measure in the water supply or in table salt; nine felt that it might be used in some cases and under certain circumstances; two men who replied to the questionnaire failed to answer this question.

Of the nine who believed it might be used, one man felt that the use of iodine in the water supply should depend on the definite showing of iodine deficiency in that locality, the O.K. of the State Medical Society, if it were a state wide question, and of the County Society, if it were a county question; another felt that it might be used in the water supply for children and in table salt by adults, only on the prescription of a physician; another felt that it might be used if carefully controlled by a medical man.

Question No. 2.—Forty-six men felt that public health agencies should restrict their efforts to educational propaganda; three were distinctly opposed to this idea; six felt that, while this restriction should be the rule, there might be certain exceptions.

Question No. 3.—Fifty-three felt that this information should be disseminated to the laity; two qualified their answer but agreed in the main with this idea.

Question No. 4.—Forty-nine felt that treatment should be left to the private physician; four favored this but felt that there might be occasions when public health agencies might enter the field of treatment; two were opposed to this idea in part.

Question No. 5.—Thirty-four felt that it would be wise to disseminate the idea that iodine is good in the treatment of only one variety of goiter, the diffuse colloid; six agreed with the idea in part; ten were definitely opposed to it; and four were dubious as to the wisdom of it. One omitted to answer.

This question was intended to convey the idea that the field of iodine, as a curative measures in the treatment of goiter, was limited to the diffuse colloid variety and that all others should not be subjected to it, except as a preoperative measure, as indicated by the succeeding questions.

One man voted "no" and stated, "There is no average doctor."

Another said iodine should be given only by "those having definite knowledge of what results to expect."

A leader from the Pacific coast voted "yes" and in a letter amplified his answer by the statement, "In the goiter clinic where we have patients under observation for a long period of time we have entirely discontinued the use of iodine in the treatment of colloid goiter because of its inefficiency. We are using desiccated thyroid for the purpose of putting the thyroid

gland at rest. Then, after it is reduced in size, we give the ordinary preventive iodine. We have observed patients with small colloid goiter treated both with desiccated thyroid and iodine over periods of time, varying from six months to two years. Desiccated thyroid was uniformly efficient while iodine usually was not. Care must be taken in making a diagnosis between early hyperplasia, both of the cellular and acinar (adenomatous) types, as those do not yield to treatment."

This coincides with the writer's feeling on this subject. But if there be a safe field for the use of iodine as a curative treatment it must be in the variety under discussion.

Question No. 6.—Two were undecided on this point; one omitted an answer; four qualified their answers as follows:

"No, I don't view adenoma other than localized overgrowth. The etiological factor is the same."

"Absolutely yes."

"No, not possible."

"No, I'd leave it to the judgment and experience of the doctor with reservations in the case of physicians competent to assess the risk," etc.

Forty-seven seemed convinced that iodine should not be given to the adenoma without hyperthyroidism.

Question No. 7.—One man who does a great deal of goiter surgery in the Middle-West wrote, "And the wise surgeon will rarely use it then;" four men stated that it was never indicated in this type of goiter; one man stated that he had given it to hundreds of cases of this type but had never come to any conclusion regarding its effect in this group of cases; another said, "I doubt the use of iodine in this type of case, even as a pre-operative measure"; three others were less certain about it.

Forty-five felt that it should be used only as a preoperative measure, after the patient was in the hospital.

Question No. 8.—Six were unqualifiedly opposed to the idea that this was always a surgical condition (three of these were surgeons); one felt that an absolute "yes" or "no" was not possible; one said "yes and no; there may be many other factors to decide"; two said, "yes, usually"; one surgeon said "yes" to the adenomatous thyroid and "no" to the asymmetrically enlarged thyroid; another felt the last six questions should be individualized and the patients

seen by a specialist; another felt that the x-ray sometimes cured these cases; three did not answer this question.

Thirty-nine believed that this was always a surgical condition.

Question No. 9.—Fifty-three were unqualifiedly of the opinion expressed in this question; one was uncertain; and one omitted the answer.

This question was intended to direct attention to the thyroid in the conditions mentioned. The writer feels very sure that in these cases the presence of a small goiter is frequently overlooked or its relation to the major syndrome misinterpreted. Regarding this question one man said, "This sounds like a lawyer's hypothetical question, designed rather to confuse than to clarify."

Question No. 10.—Two were undecided; five disagreed with the idea expressed in the question; three disagreed with some qualifications; thirty-nine agreed unqualifiedly; six agreed with reservations.

In order to orient some of the answers more clearly and to present more accurately the viewpoint of some of the men, a few letters that accompanied the questionnaire are quoted. One man wrote:

"Of course, questionnaires are very unsatisfactory. You have worded these questions allowing a more satisfactory answer by 'yes' and 'no' than is usually the case, and yet the problem is so complicated that even these questions are hard to answer."

"Personally, we try out iodine for one week in every kind of goitre with symptoms, unless accompanied by evidence of myxedema, in which case, of course, we used the thyroid gland itself, and at the end of a week, by the patient's feelings, pulse, etc., make up our minds whether or not to continue; but we use only 3 minims of Lugol's solution, twice a day, and so avoid the danger of the rather large doses."

Another said:

"I have answered your questionnaire on goitre and, while the answers throughout are in the affirmative, local or case circumstances might, under their special conditions, modify these answers."

Another:

"Enclosed you will find my replies to your questionnaire. Amplifying those replies I should like to say, in answer to question No. 1, that I do not believe that municipal or state authorities should be allowed to treat a public water supply until exhaustive chemical analysis has shown conclusively a deficiency of iodine content and further safe-guarded by approval of the State Medical Association, if the question be a state-wide one, and of the County Medical Association in municipalities."

"In answer to question No. 5: We must realize that the 'average doctor' is a doubtful authority as to the diagnosis of 'diffused colloid goiter', by which I understand you to mean adolescent goiter. Adenomas are sufficiently frequent in children of this age to make one look askance at a general advice of this nature."

"In answer to question No. 7: I have stated that I do not believe that iodine is indicated in a toxic adenoma, whether in or out of the hospital and without regard to the number of days preceding operative procedures. It is my opinion that iodine is absolutely contraindicated in all toxic adenomas except, perhaps, in the rather unusual combination with exophthalmic goiter."

"Question No. 8 raises the question of making all toxic adenomatous thyroids subject to surgical intervention. In the majority I believe that surgery is the preferable method of treatment for these conditions, but it cannot be made an infallible rule. The degree of toxicity, the age of the patient, the presence of other conditions which make surgery undesirable, may put a small percent of these cases into a group where galvanism, x-ray exposures or rest with ice bag may be indicated. It has been my experience that nearly all toxic adenomas which I have seen treated by these measures will, though they improve for a time, present subsequent evidence of toxicity."

Another man says:

"The problem of the use of iodine in these cases is subject to a considerable amount of debate and is more important to you when goiter is endemic in your locality than with us where it is only occasional. Nevertheless I have seen much harm arise from its injudicious use and it seems almost impossible to convince some members of the profession that damage can arise from its use."

Another one:

"No doubt the public health agencies should restrict their efforts to educational propaganda rather than advising the use of iodine in various forms. This no doubt has done a great deal of harm. Furthermore, the benefit to be derived from the use of iodine when hyperthyroidism is present is somewhat questionable. Its use should certainly be restricted to a limited period and then under strict supervision, preparatory to operation."

Another:

"At this state of our knowledge I find it difficult to give a categorical answer to all those questions. Much work will have to be done before our knowledge regarding the connection between iodine and the thyroid is complete."

The Dean of one school wrote, "I have wished to see that the opinion which I expressed was in fact the joint opinion of my colleagues here. The only question which I felt unable to answer 'yes' or 'no'

is question No. 4, which I have marked with a circle, somewhat extending my opinion at the bottom of the page. Otherwise, to me, the questions are more or less clearly stated and should, I think, receive wide assent."

This school is in a goiter zone. The extended opinion reads, "I think the school physicians are now in a position to deal with goiter in children more effectively than are private physicians. I, therefore, raise the question as to whether this should not be regarded as an exception under this heading."

Conclusions

In the main it is agreed that iodine should not be used as a public health measure in the water supply or in table salt. Public health agencies should limit their activities to educational work.

Treatment should be left to the private physician.

Iodine should practically never be given to the adenoma case, without hyperthyroidism, and should be given to the adenoma with hyperthyroidism only as a preoperative measure. Many men do not believe it should be given, even as a preoperative measure, to this type of goiter. Certainly its action in this type cannot be foretold, as it usually can be in the exophthalmic variety. In the latter most men feel that iodine should be reserved for use as a preoperative measure and that it has a good effect but one time. A number of men feel that this effect may be repeated and one felt that it may sometimes apparently effect a cure.

In closing I would like to emphasize the wisdom of always investigating the thyroid in cases of "nervous breakdown," hypertension, nephritis and heart trouble.

6054 Cottage Grove Ave.

Blood Chemistry and the General Practitioner

Blood chemistry reports, if properly interpreted, can be of great value to the practitioner, in diagnosis and treatment.

Although a physician may have to rely on the laboratory for chemical testing of blood, yet he must not expect the laboratory to interpret it. This must be done in conjunction with the clinical data, by the attending physician himself.

In *Canad. M. A. J.*, Jan., 1928, Dr. E. H. Mason describes the technic of a number of chemical blood tests. In taking a specimen of venous blood, a Luer all-glass syringe and a needle sterilized by boiling should be used. All water should be carefully expelled from these instruments. An elastic band should be placed above the site of withdrawal, not tight enough to interfere with the arterial flow. Venous stasis should never be allowed for more than one minute before withdrawing the specimen. The compressor on the limb should be released before the needle is withdrawn.

The sample should be placed in a small, dry Erlenmeyer flask, in which some chemical substance—such as powdered anhydrous potassium oxalate—is placed, 20 mgm. in each 10 cc. of blood. When the presence of excessive sugar or carbon dioxide is suspected, 1 drop of formalin to each 5 cc. of blood should be added. This will keep the blood-sugar constant for three days, which allows sufficient time for mailing the specimen.

In some cases it may be desirable or necessary to separate the plasma and the red corpuscles. This can be done by centrifuging the oxalated blood and pipetting the plasma into a test tube coated on the inside with paraffin.

The article gives the technic of some of the standard tests, but is especially concerned with explaining the results of the tests, so that the practitioner can interpret them in connection with the particular patient.

This is a subject too little understood by general practitioners, and this article will repay careful reading.

The Seminar

[NOTE: Our readers are cordially invited to submit fully worked up problems to the *Seminar* and to take part in the discussion of any or all problems submitted.

Discussions should reach this office *not later than the 1st of the month following the appearance of the problem.*

Address all communications intended for this department to *The Seminar*, care CLINICAL MEDICINE AND SURGERY, North Chicago, Ill.]

SURGICAL PROBLEM NO. 2

Submitted by Dr. Isaac E. Crack, Hamilton, Ontario, Canada

Recapitulation

A young man with a known hemophilic history developed a case of acute, gangrenous appendicitis.

Problem: Discuss fully the advisability of operation and give preoperative and postoperative measures to minimize danger.

Discussion by Gen. George Acheson, M.D., St. Martins, N.B., Canada

This case of Dr. Crack's is one of those unfortunate ones, where there are very strong indications against any operative procedure; and the surgeon assumes a very grave responsibility if he decides to operate. On the other hand, if no surgical therapy is attempted, a fatal termination is sure. Under such conditions, I think the patient should be given the one chance in a thousand to save his life, after frank explanation, to himself and his family, of the prognosis and danger.

Dr. Crack and his consultants then, in my opinion, were perfectly justified in operating.

As to preoperative preparation of the patient, there was no time in this case to attempt measures of this kind—it was an emergency operation. A very recent remedy for hemorrhage of all kinds, ceanothyn, might have been administered, orally, before the operation. Possibly also, the admixture of carbon dioxide gas with the anesthetic might increase the coagulability of the blood. Epinephrin or epinin might be given, orally or intravenously, as a vasoconstrictor and hemostatic. Swabbing of all wound surfaces with a solution of some suprarenal gland preparation would be advisable.

After the operation, absolute rest should be secured, if necessary, by morphine.

A hemophiliac has no business to get appendicitis!

Discussion by

Dr. Jacob Jacobson, Chicago, Ill.

There is no question as to whether operative measures were necessary. It was very obvious.

Both preoperative and postoperative medical treatment should have been undertaken more thoroughly, especially preoperative. True, the surgeon did not have much time for preoperative medication, but time enough to give horse serum or, preferably, human serum intravenously, in 20 cc. doses, repeating in one hour and then again just before operation. Diphtheria antitoxin could have been given.

Blood transfusion, prior to the operation, should always be done in these conditions. Other drugs that could be used are coaguline, 10 percent in physiologic saline solution, intravenously, 500 cc.; or gelatin, 2-percent, in physiologic saline solution, 200 cc. at 37°C. No heart stimulant should be given.

Postoperative medication should consist of a blood transfusion immediately following the operation, regardless of hemorrhage, and a second or a third blood transfusion if hemorrhage does occur. This is the best known method to stop bleeding.

If much blood is lost, lower the head, elevate the foot of the bed, apply heat and bandage the lower extremities. Heart stimulants are not to be used until the hemorrhage has been arrested. Emetine hydrochloride, in one-grain doses, intravenously, is highly recommended and may be repeated in six hours and again in six hours more, if necessary.

It is unfortunate for any patient to have a gangrenous appendix; but it is *disastrous* in a hemophiliac. I am sure no doctors are eager to operate upon them. Certainly I am not.

Solution, by Dr. Max Thorek, Chicago

The problem before us is distinctly that of a clear-cut case of hemophilia. It will not be amiss before entering into the discussion of the case to recall briefly what is known about hemophilia, and also what has been done, thus far, in the way of therapy in this disease.

Let us state at the outset, that in spite of the tremendous amount of work that has been done, in research laboratories, the world over, and the studies and observations made by competent clinical observers, the pathology of this morbid entity is thus far practically unknown.

From the point of view of causation of this disease two factors have to be considered: *first*, the pathologic conditions of the vessel wall, giving rise to hemophilia; and *second*, a definitely reduced ability of the blood to clot.

Up until a few years ago, the eminent Swiss hematologist, Sahli, thought that, in every case of hemophilia, the coagulation time of the blood is necessarily increased, or the calcium content is definitely decreased; later researches especially by Frank, revealed that, in almost every case of hemophilia, in contradistinction to previous beliefs, the calcium content of the blood was found normal. Furthermore, in many cases of abnormal bleeding, the coagulation time was found to be normal and the thrombocytes were equally normal in number. In view of these findings we must conclude that the teaching that hemophilia is due to a lack of calcium and to a decrease in the number of thrombocytes is not altogether based on conclusive observations.

As to the second cause of hemophilia, careful anatomic studies and histologic examinations of the walls of the vessels (arteries, veins, and capillaries), made upon individuals suffering from the disease, have shown them to be absolutely normal.

As to the treatment of hemophilia, all medication should be directed to improve the composition of the blood, so far as possible, and to supply it with the hormone, believed to exist in the blood. Drugs used to increase the coagulation of the blood are either those indicated to exercise a direct vasoconstrictor effect on the walls of the vessels or to influence the coagulation time of the blood itself.

It may, perhaps, be wise to recall here, briefly, the agents in use for these purposes, with the admonition that none of them are known to give definite or certain relief. Clinical experiences sometimes prove most convincing in this respect; at other times they are utterly disappointing.

Of calcium preparations we use *calcium lactate* 5 to 15 grains to the dose, administered by mouth. *Calcium chloride* is given, 5 to 7 grains every two or three hours, by

mouth; or 10 cc. of a 10-percent solution of calcium chloride is given intravenously. Often, on account of its great calcium content, *gelatin* is given in sterile solution (2.5 to 5 percent), subcutaneously. *Horse-serum* or similar sera are frequently used. Some prefer to use a coagulen consisting of the centrifuged thrombocytes of the blood of the calf. *Extracts of the viscera* (lung, liver, spleen) are supposed to exert a hemostatic influence. *Adrenalin* (epinephrin) or similar products from the suprarenal gland, and extracts of the thymus, or hypophysis are all endocrine products having hemostatic influences.

Besides the drugs enumerated above, the sovereign remedy at our command, in the conditions under consideration is **blood transfusion**. That stands to reason when we consider that, if we implant into the circulation of the patient a medium, containing *all* the elements of normal blood, we have a weapon of great power. Furthermore, we know that the transfusion of normal blood so stimulates the dormant hemopoietic resources of the patient that he is enabled to elaborate his own hemostatic agents.

We cannot subscribe to the advice given by Freund to use defibrinated blood for transfusion. This author believes that defibrination has a decided vasoconstrictor effect. We furthermore, do not advise the use of the citrate method in this connection, because we believe it to be contraindicated. After a careful survey of the literature and from personal observations, we advise the direct method of transfusions of whole blood, as described by Oehlecker and Percy, after typing of the blood and agglutination tests for hemolysis, of course.

In this connection it is perhaps wise to recall the question as to how long a time a hemophilic patient is benefited from a properly performed blood transfusion. Weil and Petterson have shown that we are able to maintain the coagulation ability of the blood of a hemophilic patient at the normal level, provided the transfusions are repeated at proper intervals, depending upon the reaction of the patient.

With these preliminary facts in mind, let us now revert to the interesting surgical problem presented by Dr. Crack. First of all, the important factor to be considered is; was an emergency operation indicated? From a careful consideration of the pros and cons, I believe that the operation was definitely indicated. The finding of a gangrenous appendix speaks for itself. This

also coincides with the views of Da Costa that "in a proven hemophilia, only an operation of *imperative necessity* should be undertaken." No one will deny that a gangrenous appendix is an "imperative necessity." That's that!

Now, as to what one should do after operation has definitely been decided upon. Surgical judgment is of paramount importance. In view of what we know about the history of Dr. Crack's patient, blood transfusion, it seems to me, should have been done preoperatively, once or twice at least. This should have been supplemented by calcium chloride therapy and the subcutaneous injection of some hemostatic serum.

I am rather surprised to find that no record was taken of the coagulation time of the patient. I suppose that the case was so definitely hemophilic, however, that this corroborative measure was ignored. If I were to be face to face with such conditions as those in Dr. Crack's case, at the operating table, I should have unhesitatingly made use of *hemostatic packing*, directly against the area operated upon—in this case, the ileocecal region. I take it for granted that all the bleeding points were carefully ligated during the operation.

I should have derived, I believe, a certain degree of satisfaction from the thought that I had directed pressure against the area involved. Furthermore the presence of a "tell-tale" pack is of great value by informing us whether or not hemostasis is perfect within the abdomen, or whether some bleeding is going on. It stands to reason that, as soon as the area operated on would begin to bleed, the extravasated blood would have made its prompt appearance along the hemostatic pack. Furthermore, if the tell-tale wick of gauze should have informed us that intra-abdominal bleeding was going on, we should have at once proceeded to check it by all means at our command.

In case of bleeding, what could we have done, you will ask? Let us see! We would at once repeat a blood transfusion, and resort to these transfusions at a time when the patient still possessed sufficient resistance to withstand the procedure. Besides that, careful observation of the patient (pulse, color, temperature, abdominal findings, coagulation, etc.) should have given us the clue as to whether or not we

are fighting a winning or losing battle, and upon these finer points of clinical manifestations we should have based our procedure.

General Acheson's discussion of the case contains the fundamental principles of the treatment of hemophilia. *Ceanothyn*, which General Acheson recommends to be given by mouth before the operation, is not, as yet, sufficiently popularized. His advice certainly is highly commendable, and shows the splendid spirit of progress displayed by him in using all that is new in the path of medical progress.

The results expected from the General's advice to use same extract of the suprarenal is somewhat dubious. I have found that swabbing of the wound surfaces with a solution of some suprarenal gland preparation is extremely ephemeral in its action and, while causing a temporary constriction of the blood vessels, will be followed by hemorrhage as soon as the action of the drug subsides. In the case under discussion, the best local hemostatic seems to me to be direct compression of the vessels after they are ligated, and the sovereign remedy is that of a snugly applied tampon. There certainly is a unanimity of opinion which leaves no room for argument on the valid aphorism set forth by General Acheson that "a hemophiliac has no business to get appendicitis."

Dr. Jacobson's remarks on the case are well worth while. It strikes me that, in every rural community, nowadays, the druggist is supplied with some form of diphtheria antitoxin. In case, therefore, the physician finds himself with a depleted supply of the usual hemostatic sera, one may resort to the antitoxin suggested by Dr. Jacobson. One thing to be kept in mind in using diphtheria antitoxin is to give the proper dosage and to curtail, so far as possible, anaphylactic reactions. It is worth while to remember the important point in the discussion of this case, that the importance of repeated blood transfusions has been justly stressed. The unfortunate condition of the patient, while extremely undesirable from the point of view of the surgeon must, however, not act in similar cases as a deterrent to prompt and scientific action.

Unfortunately we cannot pick our cases and we must be prepared to meet contingencies as they arise. We must be prepared to meet conditions as best we can

and endeavor to store up knowledge that will enable us to cope with similar emergencies should they arise. None of us knows whether a very similar problem will not confront us in the next few hours. Fortunately, for those who practice in larger communities, the counsel of experienced fellow physicians may be depended upon. It is not so, however, in small communities where the life of the patient is very frequently dependent upon the resourcefulness of the doctor in charge. To my mind, while it is true that various specialists are skilled in the highest degree in their chosen form of endeavor, the greatest specialist of all medical and surgical forms of special practice is the fellow who can justly say, "I am a specialist in general practice."

Problem No. 4 (Surgico-Neurologic)

Presented by Chas. B. Herman, B.A., M.D.,
Statesville, N. C.

The patient, a white male, 34 years of age, presented himself with the following symptoms, history and findings:

Chief Complaint: Loss of sexual power, nervousness, inability to sleep, backache and occasional headache.

Past Medical History: Usual diseases of childhood. Pneumonia when a child and again at the age of ten. He was sick about two weeks during the last attack of pneumonia, at which time he had meningeal symptoms which lasted for one week. He had a slight attack of influenza in 1922 which lasted three days. He has had no other serious illness, no injuries nor operations.

Family History: Father is living and well. Mother died of heart disease. Two brothers and two sisters living and well. Two brothers dead; one died of meningitis, the other died in infancy of unknown cause. Two sisters dead; one died of typhoid fever, the other with diphtheria.

Social Status: Married; wife living and well; two children living and well; two children born dead; wife has had one miscarriage.

Present Illness: About three or four years ago, the patient first noticed that he had to urinate frequently—about 10 or 12 times a day. At the same time, he states that he had to get up 3 or 4 times each night to void. This attack of frequent urination lasted four or five days and then he became normal again for several days, but the same symptoms returned again and

up to the present time he has had similar attacks once or twice a month.

About eight months ago, he became nervous and restless, especially at night, and was unable to sleep except for a few hours each night. About the same time, he noticed that the ground under the left foot seemed higher than under the right foot and the big toes of the left foot seemed to drag and did not "want to pick up."

Eight months ago he developed pain in the lumbar region which was dull-aching in character. He states that this symptom also troubled him more at night. At this time he also noticed that his left leg would jerk while he was in bed, but caused no pain. He has, however, occasionally had aching in both lower extremities at night.

The patient states that he is very weak and is unable to do a day's work. He staggers at night when he has to get up. For the past six months he has had an absolute loss of his sexual power, but this has been weak for twelve months. He has dribbling of urine before emptying the bladder; this is a recent symptom, having made its appearance about two weeks ago. He states that when he has urinated he feels as though his bladder is not entirely empty. He also states that if there is any tendency toward diarrhea he has no control over his bowels.

Physical Examination: Pupils are equal and react to light and accommodation. Hearing is not impaired. There is no discharge from the ear. There is no mastoid tenderness. The nose and throat are negative. The neck and chest are negative. The abdominal reflexes are active. The cremasteric reflexes are absent.

Lower Extremities: The patellar reflexes are exaggerated on both sides; positive Babinski test on both sides, more marked on the left; positive ankle clonus on both sides, more marked on the left; no Romberg's sign; no ataxia or limping; marked spastic gait. There is no muscular atrophy; thermic sensation not impaired; no saddle anesthesia or parasthesia; no intention tremors; no edema, varicosities nor scars of the lower extremities. Upper extremities normal.

Laboratory Findings: Urine: Specific gravity 1,004; no albumin; no sugar; microscopic examination negative.

Blood Count: Red blood cells, 5,200,000; hemoglobin, 92 percent; white blood cells,

(Concluded on Page 202)

Clinical Notes and Practical Suggestions

The Treatment of Trachoma

IN offering this method for the treatment of trachoma I am fully cognizant of the fact that some will be incredulous and take exception and will not be willing to give it a thorough trial; but I have assured myself that it will take care of any case of granulated eyelids, and any case of trachoma in which the glandular structures of the eyes have not been destroyed and replaced by fibrous tissue, thereby necessitating surgical interference, in from two to five weeks.

Any case which does not respond to treatment in this time is, in all probability, one that demands surgery for its cure or alleviation.

The number of cases so treated has been sufficient so that I offer this method without any hesitancy and believe that, if it is carried out with exactness, the physician will be more than pleased with the results.

Trachoma is essentially nothing more than a lymphadenitis of the glandular structures of the eyelids, and as mercury seems to have a salutary effect on such glands, it seems rational that it be applied to these diseased structures for their alleviation and cure.

The organism which is causative of this disease is of comparatively little moment to the practical physician and is of more interest to the scientist and laboratory technician.

The prime factor in the treatment of this malady is to administer an agent that is of sufficient strength to destroy the offending organism, without injuring or impairing the nerve and blood supply of the structures involved.

The general nutrition of the patient should always be under the close observation of the physician, and he should see that the proper food, clothing and other hygienic conditions are available. Tonics should be given, if indicated.

The treatment is as follows:

1.—Anesthetize the eye with a 1- to 2-percent solution of *butyn*.

2.—Render the tissues ischemic with 1:1,000 epinephrin solution.

3.—Evert the eyelids and apply the remedy to be described, with cotton on an applicator, or as much as will remain on the surface of a smooth glass rod. This can be done either once or twice daily.

4.—Begin with a mercurial solution of 1:8,000 to 1:10,000 strength, as the judgment of the operator dictates.

5.—If there is too much reaction, cut down the frequency of the treatment or its strength, or both. You can apply the treatment every day, giving the patients a 3- to 6-percent solution of argyrol to instil, three or four times daily, on the days that they do not come to the office for treatment.

Formulas

Use accurate graduates or employ the same dropper in making all solutions, so that all strength measurements will be similar.

Solution No. 1.

R Bichloride of mercury gr. x (0.650)

Alcohol, absolute

(or 95%)gtt. c (6.500)

Sig.—Ten drops equals 1 grain bichloride of mercury. (This is the "mother solution", as all strengths are measured by the bichloride coefficient, as it is the irritant.)

Solution No. 2.

R Sodium iodide.....gr. xxv (1.65)

Cadmium iodide.....gr. xv (1.00)

Distilled water.....gtt. d (31.10)

(This solution should be alkaline; if it is not, add sufficient sodium iodide to make it so.)

Solution No. 3.

To solution No. 2, add 5 drops of solution No. 1, drop by drop, until it is in solution, or in other words you have $\frac{1}{2}$ grain of bichloride of mercury, which gives you a 1:1,000 solution. At first there is a pre-

cipitation of the yellow iodides, followed by the red iodides of mercury, which are redissolved.

Solution No. 4.

Dissolve freshly prepared, inspissated ox gall, which should be warmed separately to get it into solution. If it flocculates, add sodium iodide until it clears up. Use tepid, distilled water and add the ox gall until it takes up all that it will hold; then filter. The ox gall has a tendency to dissolve the fatty secretions of the eyelids.

Solution No. 5.

Take of solution No. 3 whatever amount you may desire, and add solution No. 4 until you have the desired amount of the solution of whatever strength you may wish to use; for example:

Solution No. 3.....dram 1 (4.00)

Solution No. 4.....drams x (40.00)

This gives a 1:10,000 solution of the bi-chloride. Apply as given in paragraph 5, under *treatment*.

If it is desired to make the solution more astringent, add cadmium iodide. If the solution precipitates, it is not sufficiently alkaline, so that it will be necessary to add sufficient sodium iodide to make it perfectly clear and alkaline.

After the disease is eradicated the eyes "run" profusely, and you should use the following to dry them up:

R Aceto-tartrate of aluminum

gr. 1 (0.065)

Cocainegr. 1 (0.065)

Distilled wateroz. 1 (30.00)

Sig.—Instil into the eyes several times daily, as indicated.

If this treatment is too active, use argyrol on alternate days.

H. R. GOSHORN, M.D.,

Iola, Kansas.

DETERMINATION OF SEX (Request for Information)

I have been asked to collect material on the predetermination of sex. My first thought was to limit the work to folk lore, history and a study of the microscopic changes in the cells, but many hints have come in that the subject may really have a practical side.

I feel sure that if anything of a practical nature is to be reached, it must be by an appeal to the very general practitioners. It may really be that there is some hormone action or something of the sort, caus-

ing the ovum to attract one or other type of spermatozoon.

In studying the matter of determination of sex, opinions, practical results and published articles or references to bibliography of others, would be of great value. The term, "determination of sex", is used in the sense of controlling the sex of offspring; not of diagnosing the sex of the fetus.

I request those who have knowledge of the matter to make such statements on the general subject as seem pertinent, bearing in mind that negative information is quite as important as affirmative, and that the history and folk-lore on the subject is also interesting.

I should like to know of anyone who is experimenting in this field.

A. L. BENEDICT, M.D.,

Buffalo, N. Y.

377 Elmwood Ave.

NEONAL INSOMNIA

I am combining the few cases in my experience with neonal with those of Dr. Henrichsen who has used it in the wards for various conditions. Dr. Henrichsen states that he has used it successfully in insomnia and for severe cough. He says that it is better than any similar product he has ever tried; that the action is similar to that of veronal but does not leave the patient so "dopey." In our personal experience, we have found that, by giving one tablet of neonal before retiring, it brings on a natural sleep that lasts usually until morning.

We have used it in four cases of rather severe insomnia and believe that we have succeeded in restoring the patients to normal sleep. I believe that this is the greatest field of usefulness for the product. There is nothing that is much more distressing than an uncontrollable insomnia, which is the accompaniment of a score or more different affections of all degrees of severity and which must be controlled if the primary disease is to be treated successfully.

As a type case, we shall cite briefly the progress of a patient, E.S., who was recovering from a protracted illness, lasting for a year or more, and was in a rather weakened condition, due to numerous factors, such as household cares and disturbances from children. There developed an uncontrollable insomnia. For a week at a time, the patient would get only a few

hours of sleep, and that was very unsatisfactory. Various means were used in an attempt to break this vicious cycle, but without success. Neonatal was begun, and within two weeks the patient was getting fair rest at night; within a month's time, the sleep was perfectly normal. In this instance, as in all the others, the change appears to have been brought about by neonatal.

Either one tablet (1½ grains—0.1 Gm.) before retiring or, preferably, by dividing one or two tablets into several doses and beginning with the first one in the middle of the afternoon and continuing up until bed time, brings on a very natural sleep and the patient awakens in the morning feeling refreshed, with no headache or "hang-over."

H. C. SWEANEY, M.D.,
Medical Director of Research,

Chicago Municipal Tuberculosis Sanitarium, Chicago, Ill.

SKIN DISEASES IN THE YEAR 1731

Someone in London recently remarked to me that there had been little advance in the diagnosis or treatment of skin diseases in the past eighty years. As to the truth or falsity of this statement I am unable to vouch, but on looking over a volume on skin diseases, by Daniel Turner, published in the year 1731, which has come into my possession, I am able to state that, at least in the last two hundred years, there has been a most notable advance.

Among the list of authors consulted in the compilation of this work we find the names: Aretaeus, Aristotle, Fallopius, Galen, Harvey, Hippocrates, Paracelsus, Sydenham and Vesalius.

Under the heading, "Leprosy of the Greeks" Turner describes a series of cases which are mainly Psoriasis. He says, "As to the cause of this disease, the greatest part of the Ancients agree, that it hath its rise from melancholy, with a mixture of salt phlegm, meeting in a hot and dry constitution, and occasioning such a degeneracy of the said humors, as to produce, in its utmost stage, a sort of universal cancer."

The treatment consisted of the administration of mercury to and beyond the point of salivation, and, in the cases cited, no cure of the disease was effected.

"Coming in to her chamber the day after,

I smelt as encouraging a stink from her mouth as could be wished for: An indication of such an alteration in the humours, grown putrid, as might dispose them either to be separated and thrown off by the glands of the mouth, or missing that way, of discharge by other passages."

"Thus am I not ashamed to let the reader see, how I have been foiled in these cases, and could instance another where a double plentiful salivation—the first raised by calomel given by another; the last by unction directed by myself—had no better success."

Scabies is spoken of as follows:

"I call the local itch where the contagion or seminal principle of the disease is transmitted to a person in sound health by drawing on the glove or stocking, wiping on the linen, or lying in the sheets after persons infected with the same malady, which entering externally by the pores of the skin in to the glandules thereof vitiates their texture, corrupts their juices, and raiseth the same ferment with that from which it was propagated or derived."

Urticaria is recognized from this description:

"Before I quit this, I am to take notice of a certain itch which Fallopius terms volatick, flying suddenly over the body, and raising little bumps under the skin, like those from the stinging of nettles, producing an intolerable itch in the parts. They soon strike in and hide themselves under the skin, and itch exceedingly after scratching, appearing again presently."

"Hartman boasts of his having cured infinite numbers of people of this disturbance, by anointing with the blood coming away with the secundine, or after-burthen of women."

Some idea of the home treatment of skin affections may be gained from the following:

"A servant-maid, of a fine skin and clear complexion (being red-hair'd), was, after walking in the heat of the day, seiz'd with a burning heat and tingling in her thigh, in which, discovering a cluster of pimples in the skin, she acquainted her mistress with her fears of the small-pox, which she said were very thick in one of her thighs (a place unusual for their first appearance); the next day the apothecary, call'd in, who, perceiving nothing on her face or neck, and not being permitted to view the thigh, gave his opinion that it was not the distemper, but some surfeit from over-heating her blood.

"Being apprehensive of danger, I was call'd in, and admitt'd to view the thigh, which I found overspread with miliary eruptions, discharging great plenty of purulent matter: When I told her mistress it was the shingles, she said she was willing to satisfy me for my visit, saying, now she knew the distemper, she had a remedy which she doubted not would cure her.

"The experiment, as I after understood,

was made with the blood of a black cat (for it must be of no other color), which was smeared on the parts. I should have told you also, that it was taken from the cat's tail, being cut off for this purpose: Which was try'd only once; for hardening upon the place, and shutting in the matter, the anguish was so increas'd that the poor wench would not suffer them to go to work again: The limb looking also black, and smelling strong, they were frighten'd as believing the same mortified; and by a friend they made interest to me, that I would not resent their usage of me, but come to them again."

The cause of Small-Pox is somewhat ingeniously described.

"The disposition which inclines human kind to this disease, seems to be a certain evil impurity of the blood, conceiv'd in the womb, among the first rudiments of generation: Almost all would have this ascribed to the menstruous blood; which opinion seems not altogether improbable, because in a woman's womb there is generated a certain ferment, which being communicated to the mass of blood, affords to it vigour and spirit, and at set periods procures a swelling up and excretion of what is superfluous: But at the time of conception, when the menstrua wholly cease, very much of this ferment is bestow'd upon the foetus or child; and its particles being heterogeneous to all the rest, as something extraneous, are yet confused with the mass of blood and humours, which being thus involved, lurk or lie hid sometimes for a long while; yet after stirred up or moved by some evident cause, as any peculiar constitution forwarding the same, they ferment with the blood, inducing first an ebullition and coagulation, or rather a despumation, from whence the symptoms of the disease arise."

The belief in impressionistic marking of the fetus was quite prevalent at that time and dozens of cases are quoted to illustrate it, two of which are appended.

"Ambrose Parey gives us to understand, that in the year 1517 a child was born with the shape in its face exactly like that of a frog, which was brought to pass by the mother's holding that creature in her hand, to allay the heat of a fever about the time of her conception."

"In the *Miscellanea Curiosa*, 1682, there is a passage giving accounts of a Burgundian woman, big with child, who being often intent on looking up to the two carved images of two angels, with their arms and legs across each other, placed in the Fryar's Church of that city, had her imagination so impress thereby, that at the end of her reckoning, she was delivered of two girls, deprived of life on account of their difficult birth, with their bodies joined and crossing each other after the manner of the image she had so wishfully beheld."

R. STEWART MACARTHUR, M.D.,
Los Angeles, Cal.

INTERNAL BURDENS

An example of the Maori's appreciation of the necessity and benefit of internal cleanliness was given in the Great War when a European medical officer contrasted the absence of varicose veins among the Maori soldiers with their frequency among the Europeans, in spite of the much heavier loads the dark-skinned soldiers were obliged to carry in their packs, but a Maori noble rejoined: "No! It is not the load the Europeans carry on their backs that causes the varicose veins, but the load they carry in their bowels."—*Urol. & Cutan. Rev.*, Oct., 1927.

FAIRY TALES OF PROCTOLOGY "The Funniest Disease There Is"

"The funniest disease there is"—pruritus ani! Even as you read the sentence you instinctively smile. I wonder why? Certainly not because there is anything mirth-compelling about itching; assuredly not because it is so easy to cure that it seems funny to call such a trifle a disease! But certainly and assuredly the disease is, by acclamation, elected as the funniest disease there is—a joke par excellence—unless you happen to have it. If you do have it, it is Hell! But we won't go into that.

As my monograph on "Pruritus of the Perineum" is the only book on that subject I naturally feel a paternal interest in it and I have bitterly resented this vulgar trend to regard the ailment in a comical light. But so firmly rooted in tradition is the attitude I complain of that a reference to pruritus ani in a medical meeting is always good for a laugh, and when a paper on Pruritus Ani (Illustrated by Motion Pictures) is placed on the program of the county medical society, wise secretaries always order extra collation rations to accommodate the exceptionally well-attended meeting which will surely follow.

With much reluctance and perhaps a beginning realization that my Anglo-Saxon blood has hindered me in seeing the joke sooner, I am about to comprehend the comic side of pruritus ani. Presently I too shall see the point—in fact, I do! Here is a patient whose perianal skin is macerated by the secretion from a small, unrecognized fistula, but the joke of it is that for months the treatment has been all sorts of salves, to cure a supposed eczema. Here is another patient whose rectum is loaded with pin

worms, but whose treatment has, for the past three months, consisted of quartz lamp radiations, until now both buttocks have a real Palm Beach tan. Here is still another that has now an inoperable cancer of the rectum, which has been treated for the past year and a half with suppositories. And in none of the three cases mentioned (and many others unmentioned) has even a local examination been made—much less the thorough recto-sigmoidoscopic examination such as every case of pruritus ani deserves.

Funny isn't it? Do I see the joke? No, I do not!

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New York, N. Y.

EVERY-DAY USES OF RADIUM*

In carcinoma of the cervix, radium has been used more often than in any other one lesion. It is probably upon its action here that the reputation of radium has been built and its value estimated to date. It is my belief that radium is essential in the treatment of carcinoma of the cervix, though there may be some question as to that statement in early operable carcinoma. The reports from the various clinics where radium is used show that the mortality is better with radium, even in early carcinoma, than it is with any other method, due to the fact that there is no operative mortality with the radium. In advanced or moderately advanced carcinoma there is practically no question that radium is the agent of choice.

Several types of application may be used. The application of a capsule to the cervical canal is the commonest. Interstitial application may be made by placing needles or implants in the mass itself. Tubes or applicators may be placed surrounding the cervix, within the vagina, making a cross fire. Occasionally rectal application may be made, and also external, over the cervix.

The question of applying radium before or after operation is one that still needs to be evaluated. Postoperative irradiation has more value after the line of incision is healed. The application of radium placed in the vault of the vagina might possibly prevent a recurrence in the vaginal vault that would otherwise appear. The state-

ment is frequently made that after the uterus is removed there is no place to put the radium. Radium can be put anywhere.

The Stockholm Clinic which presents perhaps the best end-results employs a dosage of from 2500 to 3500 milligram-hours, intracervically. The screen in that instance is usually of metal, sufficient to filter the soft rays. There is some attempt to develop something standard but it has not yet been accomplished.

Recurrences in the vault of the vagina after hysterectomy are frequently treated with radium and the results are satisfactory. If it should happen that that is the only place where the disease exists, it is certainly worth trying.

There are two types of reaction to radium. The primary or immediate general reaction is characterized by malaise, nausea and vomiting and appears when the radium is removed within thirty-six to forty-eight hours. The second reaction comes with the changes brought about in the cells of the neoplasm and appears about the second or third week. It is sometimes difficult to distinguish between the last of the reaction to radium and the beginning of a recurrence. If the dosage was incorrect or the part improperly irradiated, a recurrence will appear as early as six weeks.

The prognosis in carcinoma of the cervix must be guarded. Patients under forty years of age do badly. The lesion grows so rapidly that a wide removal or thorough irradiation seems not to cut it off.

The second group of conditions where radium is used almost daily is that of uterine bleeding, excessive menstruation or metrorrhagia. Sometimes a small fibroid producing this excessive menstruation will be benefited by an application of radium to stop the hemorrhage, so that the patient can be built up and prepared for operation. One single intrauterine application of radium will usually take care of these cases. Formerly, women in the childbearing period were given 400 to 500 milligram-hours, so as not to produce amenorrhea. Now 1200 to 5000 milligram-hours are given. Amenorrhea will last as long as eighteen months and menstruation will then recur. There are quite a number of cases reported of pregnancy and normal labor following such treatment.

There is a contraindication to the use of radium in patients with acute or subacute

*Abstract, from *Bul. North Shore Branch, Chicago, M.S.*, of paper read Nov. 1, 1927.

adnexal infections or in the presence of a salpingitis or infection of the uterus.

The third group of cases is composed of epitheliomas and various benign lesions of the skin. The results in this class are approximately 90 to 95 percent successful.

A. J. LARKIN, M.D.,

Chicago, Illinois.

DON'T SPOIL YOUR PATIENTS

If you make a night call and charge only day rates, you may expect your telephone to ring just when you need sleep most.

If you give free advice over the telephone, your patient will find this method much cheaper and more convenient than coming to the office.

If you cut your fee for the benefit of those who can afford to pay, but hate to do it, your own bank account will become anemic.

A spoiled child may be corrected by whippings, but there is no cure for a spoiled patient.—*The Clinician*.

PHYSIOLOGIC SALINE SOLUTION, BLOOD TRANSFUSION AND CRIME

(Comments on CLIN. MED. AND SURG.
for November, 1927.)

In your "Do's and Don'ts" for young physicians (CLIN. MED. AND SURG., Nov., 1927, p. 861) why do you advise against affiliation with free clinics?

The fifth "don't" amused me, for I don't think it matters so much, ethically, as the fact that "Dr." seems to be stolen from the medical men by the "Rev.s" and many other professional men. To me it seems as though they should be more original—Dr. of Divinity doesn't sound just right! The doctor wouldn't think of having some one write Rev. Smith, M.D.

The word Smith brings my attention to Dr. J. R. Smith's article, also in the November issue, under *Clinical Notes* (p. 859). Can it possibly be that the appendix at one time supplied an element (digestive) which made for longevity, in the days when our ancestors threw cocoanuts at each other, or before that? If some of the old boys' bodies (like Methuselah) could be dug up, would it be possible to find out why he lived so long, by looking at the appendix? I wonder if an occasional pain in the appendiceal region might possibly indicate the

growth of fibroid tissue—adhesions—something besides the collection of pus? A doctor operated on a little boy, six years old, for appendicitis, and the appendix was found to be normal. The little boy had *pneumonia*. Physiologic saline solution, per rectum, helped to pull him out of a nasty hole.

Speaking of physiologic saline makes me think of a case in Indiana where the patient was suffering with pneumonia, and for years had such a collection of diseases and troubles that I could almost truthfully say, "everything but fleas." The crisis came and he looked as though the end were near. The doctor's car (13 miles away) was bogged in the spring mud, at 2 A.M., and I asked permission to call someone who *would get through somehow*. He came! A young chap; gave a hypodermoclysis, with needles that grated from the rust as they punctured the skin (a retiring physician had given them to him), and the isotonic saline solution brought the patient out beautifully—like rain to parched grass! Four hours later another injection of the solution, and his life was saved.

I haven't the slightest faith in blood transfusion. If the patient gets well in spite of it, they are benefited, you say (almost always they die!). Why not try the salt solution first, instead of the blood transfusion? What sort of an insurance policy could be taken out before having a blood transfusion treatment? Heaven only knows what unknown germs may lurk in a bloodstream, which simple laboratory tests (often taken in a hurry) cannot yet see, because the lens may not be strong enough to discover them? To a lowered resistance, strange blood cells introduced may be hard to absorb.

The article by C. F. Read (p. 862) is splendid and I wish it could be published in all papers—not on the editorial sheet, but on the front page! It's worth more than a murder story to the public. The people who need to read it most seem to be the ones who fairly eat up column after column of murder stuff! I wonder what effect goiter might have on crime!

"INTERESTED READER."

[We rarely publish communications anonymously, but here are some pertinent suggestions, expressed in a breezy style.

Free clinics are probably a necessity, under present conditions, but, as now con-

ducted, they are used very widely by people who can well afford to pay for professional services and it is a bit unwise to countenance the abuse of medical charity. The individual doctor can do his charitable work on *selected cases* to better advantage.

There is still much to be learned about the appendix and its functions (even if Methuselah was no older than people frequently live to be in this generation, as seems probable); and there is much room for more careful diagnosis between appendicitis and pneumonia, as well as a number of other conditions.

Most physicians do not make sufficiently frequent use of hypodermoclysis and intravenous infusions of physiologic saline solutions. These are life-saving procedures, in many cases. All sorts of parenteral medication should be used more widely—if the injections are given with care and intelligence.

Blood transfusion is still a hospital procedure, and is not for the practitioner, under the conditions in which he has to work. Isotonic saline solution is much safer, and is often quite as effective. There is reason to suppose that much of the good effect of transfusion may be due to the foreign protein reaction. Why not try boiled milk (lactigen), intramuscularly, in infections?

If the things which Read and others are saying about mental hygiene and behavior could become front page "news" we might arrive sooner at the solution of some of our pressing problems. At any rate, we can all pass on this information to those with whom we come in contact, and that will help, materially.

If this "Interested Reader" finds so many things which make him think, in one issue of CLINICAL MEDICINE AND SURGERY, others must be doing the same thing. Why not tell us about it?

We hope "Interested Reader" will give us more practical suggestions and let us tell you who he is.—ED.]

NEWSPAPER PUBLICITY OF HEALTH MATTERS

In the State of Wisconsin a weekly medical press service (now in its second year) has been established which reaches every daily paper in the State and 160 weeklies. The news items emanate from and are edited by the State Medical Society.

The item of news, which forms the basis of the weekly medical story, must be one of interest to all the people; it is told in simple, untechnical language in 600 words or less; it must convey a message of benefit to the readers.

No exploitation of any kind, personal or other, is permitted.

The State Board of Health has indorsed the idea as one contributing to the public welfare, and direct traceable results are being reported in every section of the State. It is also believed to be of direct financial benefit to the medical profession of the State as a whole.—DRS. J. G. CROWN-HART AND F. L. HOLMES, in *Am. Med. Assn. Bull.*, Nov., 1927.

FIVE "DON'TS" FOR BABY'S BATH

Insure your baby against accidents which frequently occur during the morning bath by observing the following five rules:

- 1.—Don't put the baby in the tub before testing the water.
- 2.—Don't add hot water to the bath while the baby is in the tub.
- 3.—Don't wash the inside of the baby's mouth.
- 4.—Don't leave the baby alone for a moment in the bath tub.
- 5.—Don't let a draft blow on him while he is being bathed.—*Children, The Magazine for Parents.*

TULAREMIA

Seasonal incidence of cases of tularemia is due to the seasonal variation of three sources of infection, tick bite, fly bite, and the dressing of wild rabbits, but owing to the overlapping of these influences, cases have occurred in the United States in every month of the year. The great reservoir of infection and the greatest source of human infection from tularemia is the wild rabbits—jack, cottontail and snowshoe varieties—but owing to the agencies of blood sucking insects common to rabbits and man, we find cases resulting from tick bite and fly bite.

Of the rabbits offered for sale in the Washington, D. C., market in the winters of 1923, 1924, and 1925, Dr. Edward Francis, of the Public Health Service, examined the livers of 1,000 and found 9, or slightly less than 1 percent, infected with tularemia. The liver and spleen of an infected rabbit are studded over the surface with small spots varying in size from that of a pin-

point to 1/16 inch in diameter. Of 22 cases of tularemia in Washington, 17 of the patients had dressed wild rabbits bought or sold in the market, 4 had dressed rabbits shot nearby, and one had dressed a rabbit which he had killed with a club.

Four hundred and twenty cases of tularemia have been reported, of which 17 have died. This places the mortality at about 4 percent. These figures embrace only the cases which have been reported to the Public Health Service, but considering the newness of the disease, they probably represent only a portion of the actual number of cases and deaths.

Cases have now been reported from Japan, from the District of Columbia and from 37 States, the nine northeastern States being the only significant portion of the United States in which cases have not been recognized.

As a rule, when the infection has come from a rabbit, some injury has been inflicted on the hand while dressing the rabbit, although a manifest injury is not necessary for infection to occur. Usually an ulcer develops at the site of infection, accompanied by enlargement of the lymph glands which drain the ulcer. Fever is always present and continues for two or three weeks. The site of infection from tularemia may be located on any part of the body, if due to tick bite or fly bite. The diagnosis of tularemia is confirmed by a blood test. One attack confers immunity in man. Rest in bed is the most important part of the treatment. The enlarged lymph glands should be opened only after pus has definitely formed.

The infection has never been found in nature in domesticated rabbits raised in rabbitries.

No preventive vaccine or curative serum has yet been perfected, nor has any special drug been found effective against tularemia.

Rabbit meat, thoroughly cooked, is harmless for food, and it has been found that a temperature of 56° Centigrade, (133° Fahrenheit) kills the germ of tularemia. The ordinary disinfectants are effective. Rubber gloves should be worn by those who dress wild rabbits. Immune persons should be employed to dress them where possible. Infected rabbits, kept frozen for thirty days, have been found to be free from infection. Market inspection of rabbits is impracticable, because only about 10 percent of the

rabbits found in the market still have the liver in place.

Beware of the wild rabbit which the dog or cat has caught, or which a boy has killed with a club—it is probably a sick rabbit. The hunter should not shoot his rabbits at the point of his gun. Let him be a sportsman and shoot them on the run at 75 yards, say, and the chances will be lessened that the rabbits he bags will be sick with tularemia.

U. S. PUBLIC HEALTH SERVICE.

"TOO BUSY"

The president of one of the nation's largest corporations felt "seedy." He went to his doctor.

"When was your blood pressure taken last?" asked the physician.

"Blood pressure?" asked the bewildered "king of industry." "Why, never."

"How old are you?" asked the doctor.

"Fifty-two."

"How often do you have the books of your company audited?"

"Annually. Why do you ask?"

"You seem more careful about auditing your accounts than you are about auditing yourself. Suppose you found your accounts inflated. Wouldn't it be serious?"

"Rather," said the president.

"Well," said the doctor, "your blood pressure should be 150. It is 181. That inflation is serious enough for you. It means that you drop work for six months at least."

"Six months," echoed the man. "Why, Doctor—"

"Yes, I know," cut in the doctor, "Too busy, I presume. That's what has brought you where you are."—EDWARD W. BOK, in *The Doctor*.

INFERIORITY REACTION

One of the most fertile causes of the almost universal "inferiority reaction" that we hear so much about nowadays, is some false valuation placed upon a boy's or girl's capabilities and accepted by him. Many of us know to our bitter cost how next to impossible it is for us to alter such estimates.

Parents have their likes and dislikes. Some traits "rub us the wrong way." Others are especially sweet and dear to us. But to allow these deeds and traits of our own children to sway us into showing preferences and antipathies toward them, is a monstrous thing.

Consider the common parental practice of holding before a laggard child the successes of a model brother or sister. The common result is the growth of a bitter and deep-seated hatred and jealousy toward the brother or sister who is the model. A less evident result is the fostering of a profound sense of the child's own inferiority.

Pitting a brilliantly endowed child against a normal one of the same age, or a naturally bright younger child against a retarded older child, is a bit of refined cruelty.

When this occurs, watchful parents may do a great deal to neutralize it by emphasizing the few admirable traits possessed by the less favored one, as well as by avoiding comparisons of the less favored child with the more happily endowed one.

Home praise can do wonders in correcting the world's judgments. The child who is freely and frankly praised for the things that parents can honestly commend is saved from the perils that beset the child who is never given appreciative encouragement.

The unpraised child, suffering from unhappy comparisons, flees from reality, because it is too hard to bear. This is a most dangerous habit for any child to establish.

The values that parents set upon their children will be accepted by the children themselves, whether they be just or unjust. Later in life it will be difficult if not impossible for them to alter these estimates of themselves.

FRANK H. RICHARDSON, M.D.,
In *Children, The Magazine for Parents.*

10,000 BIRTHS NOT REPORTED IN ILLINOIS

A study of all the factors which are considered in arriving at the infant death rate for Illinois, including reported births, reported deaths and U. S. Census estimates of our population, show pretty convincing evidence that we are slipping in our birth reports.

What does this mean to the doctor? First, he has failed in a duty to his family, because a birth certificate may be needed to prove citizenship; to establish rights or inheritance of property; to establish proof of age for entering or leaving school, for entering military service, for securing working permit, for securing marriage

license, for holding public office; to secure passports; to adjust insurance; and other financial benefits. Are your patients writing to the Department of Public Health asking for a certificate of birth, only to be informed that the Department has no report of the birth?

What does it mean to the medical profession of Illinois? That we are charged with a higher infant death rate than we deserve. Infant death rates are estimated on the basis of reported live births; that is, in 1926 for every 1,000 live births there were 71.5 baby deaths under 1 year of age. If we don't report our births, some one else will. The estimated total shortage for the State is about 10,000; and for Chicago the estimate is 1,154 short. We suggest you print this letter in the weekly Bulletin of your Society and do all in your power to get every doctor to do his full duty in this matter.

Is your local clerk or registrar sending in reports promptly to the State Department? It might be well to call his attention to this important matter.

R. R. FERGUSON, M.D.,

Chicago, Ill.

[This article was sent to the secretary of the Illinois State Medical Society, who was requested to send it to all County Secretaries.

We have reprinted it from the *Bulletin of the Chicago Medical Society* because we believe that similar conditions exist in most, if not all, of the states, and we wish to urge upon our readers to take the matter to heart and act upon the suggestion.

No physician who attends a confinement has done his full duty to the mother, the child, the State and the Nation until he has sent in a birth certificate, fully and accurately filled out; and he has no right to submit a bill for his services until they are completed in this manner.

If we will all take our public duties, to the State; as seriously as we take our private duties to the patient, there will be no cause for complaint, we feel sure.—Ed.]

DISEASED TEETH AND TONSILS

In an active practice of 31 years, I have come to the opinion that diseased tonsils and teeth cause more sickness than is due to any other one condition.

Frequently a diseased appendix has a diseased tonsil back of it, dating back pos-

sibly for years. This same statement will hold good on endocarditis, with a leaky valve as a result; it will apply to a large percent of ear cases; it will hold good for infected gall-bladder cases that have to be operated upon. Tonsils and teeth cause rheumatic conditions, nephritis, pelvic infection and many other conditions, and I have heard some doctors claim that they never saw a case of diphtheria in a child who had his tonsils removed and that diseased tonsils affect scarlet fever cases.

My experience is that it is wasting time and money to treat a chronic case unless the tonsils and teeth are cared for. I have tried all methods to cure diseased tonsils and I feel that a clean tonsillectomy is the only method worth while. In doing a tonsillectomy, I often find pus when the tonsil appears to be in a healthy condition. Some have buried tonsils and a badly diseased condition, and at the same time they will tell you their throats are never sore. I presume this is on account of poor nerve supply to the tonsil.

I rely on the dentist to care for the teeth in every case. I am criticized for the attitude I take in all chronic cases, but I believe I am right and would like to hear from some who have had a wider experience.

D. D. HAMILTON, M.D.,
Springfield, Colo.

[There is no doubt that infected teeth and tonsils are responsible for a great many cases of obscure chronic illness; but there is also little question that many sound teeth and tonsils have been removed because such removal was looked upon as a panacea for all human ills.

In the first place, by no means all forms of chronic disease are due to focal infections; and in the second place, even if they were, there are other foci which frequently cause trouble, notably the rectum, prostate, gall-bladder and probably the appendix. We will make many mistakes if we feel that an inspection of the upper end of the alimentary canal is sufficient for making a diagnosis in all chronic cases. Many conditions require psychotherapy rather than surgery.

If teeth or tonsils are actually diseased they require active attention; but just what form that attention shall take is still a moot point. Every man who *gets results* is entitled to rely upon his own methods.

It would simplify medical practice enormously if we could find a universal panacea, but, as yet, none has been discovered, so far as we are able to learn.

We shall be glad to hear further opinions on this subject.—Ed.]

TO A CONSUMPTIVE FRIEND

Since health thou seekest, Friend of mine,
Go learn this while you may,
That Nature's aid must be invoked,
To drive thine ills away.

No panacea waits for thee,
But do not feel dismayed,
For God's good gifts of sun and air
Are on thy side arrayed.

The fields and trees, the golden sun,
The sky and mountains blue,
Will bring you close to Nature's God,
And win back health for you.

Then go thou forth resolved to live,
No matter what the clime,
As near to Nature as thou canst,
And outdoors all the time.

So plain a life may hold less charm,
Than one more full of strife,
But health is worth a ton of wealth,
In summing up a life.
—H. EDWIN LEWIS, M.D., in *The Doctor*.

(Concluded from Page 192)

6,000; polymorphonuclears, 66 percent; small lymphocytes, 27 percent; large lymphocytes, 6 percent; eosinophiles, 1 percent.

Blood Wasserman Test, negative; *spinal fluid Wassermann Test*, negative; *x-ray examination of spine*; negative.

Requirements: (1) What and where is the lesion? (2) Why? (3) Outline the treatment of this case.

The Leisure Hour

Hymn to Light and the Sun

Part II

The Seeing Man

When I see the sun of morning
On the blue and wakened water;
When the play of waves is quiet
And like laughter rays are breaking,
Then I walk and dream in wonder
That the God of all light nears me
Bringing words of warmth unto me.
And I hear
A mighty chorus of sun-filled worlds,
"Let there be light!"

Or, lying in the shade of willows
When the rain of sun is streaming
Near the beat and song of billows,
Then I yearn toward heaven, dreaming
That you sail high on a blue cloud,
Lord of Light in snowy shroud,
Glorious and good as your midsummer day.
And I hear
A mighty chorus of sun-filled worlds,
"Let there be light!"

Or if the sun sinks in the waters—
A bather of gold in a golden bath,
A flaring fire over gold brocade—
And clouds are flaming,
Then I dream: high over the circle of sun
A gleaming, soundless street
On billowing waves comes down to me
From the God of light,
And I hear
In a mighty chorus of sun-filled worlds,
"Let there be light!"

Translated from the Swedish of Dr. Ernst V. Knape,
by Miriam Heideman Krarup.



Trichopathy—A Prospectus

ONE of the most vivid of early memories which has always lingered with me recalls a time when as a little boy I played in my father's barn out on his frontier farm and imagined that I was a doctor caring for some one who was sick. I can still recall the thrill of joy I felt in handling the play medicines, made of little pieces of twigs broken into small sizes.

Afterwards, in my childhood, the idea often recurred to me that I would like to be a physician; but the years passed and when I grew up I turned to quite a different occupation, little imagining that I should ultimately follow the leadership of Hippocrates, the first of those who have devoted their lives to curing the diseases of man.

When young, I understood that there were at least two theories followed in the treatment of diseases. Our family doctor was called an "allopath", whatever that meant, and because he helped to bring us back to health when we were sick I had confidence in his methods. It was natural and reasonable for me to believe in "allopathy."

Later, we had one who was a homeopath. We trusted him implicitly and he cared for us and our children with equal success, although his theory of medicine was decidedly different from that of our former friend. By this time I was old enough to think for myself and studied the principles of homeopathy, and I must admit that they seemed to me unreasonable, if not ridiculous. I could not understand how minute, infinitesimal amounts of drugs could produce the desired effect. But the fact, proved by experience was that they actually did do so.

This contradiction showed me that the importance and value of a system of medicine may be due to principles unknown to us, in short, that we must not expect to be able to apply the critical tests of reason to medical practice. I did not realize it at the time, but I now see that it was precisely this observation which led me directly to the great discovery which I am now about to announce to the world.

How often, in the past, have systems of medicine which do not appeal to our judgment been followed with great satisfaction by those who employed them?

In the time of our ancestors the scraping of the tongue was regarded as a means of

curing many if not all ills and men regained their health after the treatment. Our own fathers resorted constantly to bleeding, even in cases where it would seem to us there was a lack rather than an excess of blood. There was "hydropathy", in which water, helpful in many diseases, was used as a cure-all. And it certainly was a useful remedy. Mesmerism and hypnotism were each dominant theories for a time. We had mud baths, sun baths, and grape cures, properly indicated by their names, and christian science, less logically designated.

A few years ago the doctrine was propounded that the proper approach for the cure of all diseases was the treatment of the bony structure of the body. Now a later stretch of the creative imagination has discovered that all physical ills are due to maladjustments of the vertebrae of the spinal column, which fortunately may be put into place again by certain thrusts or punches prescribed and taught in a school benevolently founded by the discoverer of the method.

Who will say that these various systems are unreasonable? They may be, but have we not already admitted that we may not safely judge them by the strict rule of reason? Do not forget that countless patients have recovered from serious illness after having been treated by each of the systems mentioned.

It is not a question, "Which is the correct method?" Each one that cures is correct. Our only question is, "Which is the best?" Or, where so many different theories have been proposed and practiced successfully, may we not hope that there remain still others to be discovered? May we not rather go still farther and expect that the long series of the past may finally be brought to an end and climax by one method that is to be the final culmination of human wisdom, as manifested in the treatment of disease?

Such is the profound conviction of the writer who has had the joy and honor of discovering and formulating the Great Truth of Trichopathy, the Light which shall illuminate the darkness that has enveloped the human race until the present day—the keen edge that shall cut the bonds of all human ills that have ever shackled the bodies and souls of men.

Since the day of the first physician in ancient Greece, almost all medical terms have been derived from the language that he used. Therefore the name of our science has been formed from two Greek words: *θρῖξ* (thrix) and *πάθος* (pathos) and may be properly translated "treatment through the hair".

I am not sure when the first suggestion of the truth of Trichopathy came to me. Perhaps it was in the Sunday-school, when we read the story of Samson, whose strength was said to lie in his hair. Now this is the distinct assertion of the Bible and is no more to be questioned by us than are many other statements, such as the story of the whale and Jonah, and the creation of the world between Sunday morning and Friday evening, which would be hard for us to accept on any other authority. But note with care that the Bible tells us that Samson's strength was in his hair and depended on it.

As soon as our attention has been called to this fact we recognize that it is exactly what we would expect. Our observation has shown us that strength is commonly accompanied by an abundance of vigorous hair. Without having noticed it, perhaps, we instinctively associate the two ideas, strength and hair. Who does not picture to himself a football player—the ideal of manly strength—as having a strong, heavy growth of hair? And are not poets, the source and inspiration of intellectual and spiritual strength, always adorned by long, glistening locks? On the contrary, no one with a pale straggling beard could ever be expected to display strength of any kind.

As for baldness, the extreme of hairlessness, all the data accumulated during the centuries of recorded history prove, without one exception, that while baldness may not indicate any acute malady it does invariably point to the approach of death, for in every known case it has been found that the man who has become bald has been nearer his end than he was before when his head was duly covered with hair.

I am sure that the arguments already presented have appealed to the reason of all who have received them thoughtfully. But if still another proof is needed let us find it in the example and experience of the pleasing companion of our fireside.

We all know that the cat's hair is an invariable and infallible sign of its health or sickness. Every healthy cat has a heavy

coat of smooth, glossy hair. Without this it is surely sick and probably cross.

Such observations as have been recounted convinced me beyond any doubt that the hair is both the sign and source of health and strength. When this was clear to me I saw immediately that if it is the sign and source of strength, then of course its condition is of vital importance and it is at the same time the right and only means of approach for the correction of disease.

It is really surprising how obtuse men are to the meaning and significance of facts which they imagine they understand. We all know that "highest nature is our best guide", and yet we blindly ignore the lessons she tries to teach us. Nature has always rebelled with nausea and anger against the introduction of offensive medicines into the mouth and stomach. They are offensive because Nature knows that they are useless and harmful when so taken. And yet mankind has continued to take drugs internally and has tried to force Nature against her judgment and will. We have learned better in regard to dumb animals than we have for ourselves. We know that they positively will not swallow noxious drugs and therefore when we want to give medicine to a cat we make it in the form of an ointment and rub it into the hair. Centuries of writhing and retching have failed to attract man's attention and convince him that the same method of treatment is available for his own troubles.

Again, every one who has suffered from headache knows the comfort and relief to be received from having his hair rubbed. Pain has been driven away and relaxation has taken its place.

We see how soothing and comforting it is to a cat to have its fur rubbed the right way, and what a different and undesired effect is produced by rubbing in the wrong direction. It is precisely so with men, women and children.

Simple and clear as the great underlying truth of Trichopathy is, one must give profound study to the subject in order to become qualified for relieving all human ills by means of this most effective system. It is necessary that all who are to practice Trichopathy should learn the lessons of medication and manipulation from those who alone know the various methods—who have, indeed, themselves invented and perfected the system.

In order to provide proper and complete instruction for the many hundreds who will learn the truth and practice the art of Trichopathy, the University of Trichopathy has been organized and incorporated under the laws of the state, empowering it to confer the degree of Doctor of Trichopathy — abbreviation, Trich. Doc. — upon those whom it deems worthy of the title.

Only persons of superior ability will be received as candidates. Consequently the fortunate ones who are accepted will have the satisfaction of knowing that they are enrolled among the leading minds of the day.

The completion of the curriculum will normally require two years, but the actual length of time in residence will depend upon the ability and industry of the individual. It is even conceivable that exceptional students, such as have finished the higher grades of the public school with good marks, may be able to graduate in six months or possibly less and thus be ready without further formalities or delay to begin the practice of the most honorable profession of Trichopathy.

The tuition fee is uniform for all, however long or short a time they may remain in attendance at the University, and the amount has been fixed at the moderate sum of five hundred dollars. Only a thought will convince any serious minded person that this rate is even less than it ought to be.

Other institutions, commonly regarded as the greatest in our country, charge nearly as much, although they offer only fragmentary instruction in the fields of language, literature, philosophy, history, and the arts and sciences, all of which together are not to be compared with the Truth of Trichopathy.

Into this bright and broad new field of usefulness all who wish to help their fellow-men and themselves will be cordially welcomed.

EDWARD B. T. SPENCER.

The doctor took one glance at his new patient. "You'll have to call in another physician," said he.

"Am I as sick as all that?" gasped the patient.

"No, but you're the lawyer who cross-examined me last March when I was called to give expert testimony in a certain case. Now, my conscience won't permit me to

kill you, but I'm hanged if I want to cure you, so goodby."—*Pharmaceutical Advance*.

MUSIC AND ANATOMY

A child had been to Sunday School to hear a missionary lecture. When she returned her father asked her if the lecturer had told about the poor heathen. "Oh, yes!" she replied, "he told us that they were often hungry, and when they beat on their tum-tums it could be heard for miles."

Imagination must always be reckoned with in medicine—sometimes as a friend, sometimes as a foe. A certain doctor treated an old woman for typhoid fever. On each visit he took her temperature by putting a thermometer under her tongue.

One day, when she was nearly well, the doctor did not bother to take her temperature. He had hardly got a hundred yards from the house when her son called him back.

"Mother is worse," said the man. "Come back."

The doctor returned. As he came into the sick room the old woman looked at him reproachfully.

"Doctor," she said, "why didn't you give me the jigger under me tongue today? That did me more good than all the rest of your trash!"

JUST CAREFUL

Lawyer—Then you say that this man was intoxicated?

Witness—I do not. Simply said that he sat in his car for three hours in front of an excavation waiting for the light to turn green.—*Judge*.

FILLING NEEDED

"Mama, I've got a stomach-ache," said Peggy, aged five.

"That's because you haven't had any lunch yet," answered Peggy's mother. "Your stomach is empty. You would feel better if you had something in it."

That afternoon the minister called and, in the course of conversation, remarked that he had been suffering all day with a severe headache.

"That's because it's empty," said Peggy brightly. "You'd feel better if you had something in it."—*Children, The Magazine for Parents*.

Thumbnail Therapeutics

LIVER EXTRACT IN HYPERTENSION

Liver extract in $\frac{1}{2}$ to 2 cc. doses, hypodermically, daily or every other day, for several weeks, definitely lowers high blood pressure. Dried liver extract in 5-grain doses, three or four times a day, by mouth, assists the treatment. The early doses should be given very carefully with epinephrin at hand to meet a sudden fall of pressure, with collapse, if this should occur.—DR. L. E. MAHONEY, in *Calif. & West. Med.*, Feb., 1927.

METAPHEN IN BABIES' EYES

Due to its high germicidal effect, particularly on gonococci, metaphen is admirably adapted for disinfecting the eyes of the newborn. A 1:8000 solution in distilled water should be used. It is less irritating than silver nitrate.—DR. GEO. W. RAIZISS, of Philadelphia, Pa.

KIDNEY STONE AND PYELITIS

You have not cured your patient even when you have succeeded in getting out the stone. There is probably a residual pyelitis which needs attention.—*Urol. & Cutan. Rev.*

SPINAL DRAINAGE IN INTRACRANIAL PRESSURE

In meningitis and other conditions which cause an increase in the intracranial pressure, spinal drainage is a very important and valuable procedure.—DR. JOSEPH BECK, of Chicago.

EPINEPHRIN IN APLASTIC ANEMIA

A case of aplastic anemia has recovered, apparently due to the action of epinephrin, which seems to exert a direct stimulatory effect on the bone marrow.—DR. A. G. GIBSON, in *Lancet*, Nov. 6, 1926.

SLOW INTRAVENOUS INJECTIONS

Intravenous injections as commonly made are given too rapidly. It is not clear why they should not be given with the same caution, from a physiologic standpoint, as the rectal injection (Murphy drip method). In the case of epinephrin, more of this active substance is injected intra-

venously in a few minutes than passes into the circulation normally from the suprarenals in twenty-four hours. The physiologic effects of some drugs vary greatly according as they reach the circulation in small or large amounts.—*Therap. Gaz.*, March 15, 1927.

PERNICIOUS ANEMIA

There is enough evidence of the value of hydrochloric acid in pernicious anemia to make it worth while for the physician to bear in mind that a gastric analysis should be made and that hydrochloric acid should be given if the analysis reveals its absence or reduction in amount.—Editorial in *Therap. Gaz.*, Jan., 1927.

DIATHERMY IN GONORRHEAL EPIDIDYMITIS

Eleven patients with aggravated forms of gonorrheal epididymitis were treated by diathermy, receiving altogether 15 treatments (2 patients having received two and one patient three treatments). All except two showed immediate improvement following the first treatment. The average time in hospital for this group was 6 days, compared with 9 days for a control group.—DRS. GRANT AND CUTTER, in *Am.J. Surg.*, August, 1926.

BATHERS' EAR TROUBLES

When bathers come out of the water they should not blow the nose but let the water drain out of it. No water should be swallowed while swimming because swallowing opens the eustachian tubes and water may gain entrance to the middle ear.—DR. MCAULEFFE, in *M.J. & Record*, Sept., 1926.

ANESTHESIA IN ECLAMPSIA

Ether, chloroform, nitrous oxide, and ethylene produce changes in the blood constituents very similar to those seen in eclampsia.

These general anesthetics also produce pronounced liver lesions as well as less marked changes in the kidneys.

The use of these general anesthetics in the treatment of eclampsia seems open to objection.

The fact that morphine raises the CO₂-combining power of the blood and does not damage the liver, affords justification for continuing its use in the treatment of eclampsia.—DR. H. J. STANDER, in *Am. J. Obst. & Gynec.*

SILVER NITRATE IN VINCENT'S ANGINA

The great remedy for infections with Vincent's organism, whether angina or stomatitis, is silver nitrate; but it must be applied by a rhinologist and a dentist who *know how*, working in *collaboration*, if satisfactory results are to be secured.—DR. BURTON HASELTINE, of Chicago.

ARSPHENAMINE TECHNIC

Before opening an ampule of nearsphenamine or other similar drug it should be immersed for several minutes in 95-percent alcohol, to sterilize the surface and test for cracks. If alcohol enters, the ampule must be discarded.—*Clinical Excerpts.*

SODIUM SALICYLATE INTRAVENOUSLY FOR HERPES ZOSTER

Daily doses of 20 to 30 grains of sodium salicylate, given intravenously for 4 or 5 days, frequently produce good results in the treatment of herpes zoster.—DR. C. D. COLLINS, of Chicago.

RADIUM OR TONSILLECTOMY?

In the implantation of removable platinum radon seeds we have an adequate substitute for tonsillectomy in those cases in which surgery is for any reason contra-indicated.—DR. J. C. SCAL, in *M. J. & Record*, Dec. 1, 1926.

NEOCINCHOPHEN

Neocinchophen is a mild analgesic, especially against rheumatic pains. It is better than cinchophen because it is tasteless and does not cause gastric disturbance. It is better borne than acetylsalicylic acid (aspirin) and is as efficient in doses of 5 to 7½ grains (0.3 to 0.5 Gm.), given hourly, if required.—DR. BERNARD FANTUS, in *Bull. Pharm.*

TO REMOVE MERCUROCHROME STAINS

Stains on the skin from the use of mercurochrome may be removed by rubbing in a 2-percent solution of potassium perman-

ganate, followed by a 5-percent solution of oxalic acid, or by alcohol containing 2-percent of strong hydrochloric acid.

Dakin's or Labarraque's solution (chlorinated soda) or chlorazene are also very effective, on skin, utensils or white fabrics. Labarraque's solution should be diluted 1 to 4. Granite or enameled vessels should be used.—JOSEPH LELYVELD, in *J. N. A. of Chiropod.*, Aug., 1927.

TETANUS NEONATORUM

The subcutaneous administration of magnesium sulphate (0.2 Gm. per kilog. of body weight, in a 10-percent solution) causes relaxation and control of convulsions in tetanus neonatorum, which other sedatives have failed to do.—DR. MUELCHI, in *Am. J. Dis. Child.*, Sept., 1926.

EPILATING WAX

A wax, efficient for epilation and which is in every way as satisfactory as commercial waxes, can be made of beeswax, 1 part by weight, and finely powdered rosin, 4 parts by weight.—*Therap. Gaz.*, Jan., 1927.

INJECTION OF FLUIDS AFTER OPERATION

Most patients need parenteral injections of fluid after operation. These may be given intravenously or by hypodermoclysis and should contain salt, soda and dextrose (glucose). By this procedure lost fluids are replaced and elimination is encouraged.—DR. WELLER VAN HOOK, in *Bost. M. & S.J.*, July 28, 1926.

SMALL PILLOWS

Great comfort can be afforded patients who are sick in bed by providing several small pillows (6x10 inches), some filled with down and others with hair. These can be arranged, as needed, so as to produce pressure or give support.—DR. JOHN BRYANT, in *Bost. M. & S.J.*, May 20, 1926.

VACCINES INTRAVENOUSLY IN ARTHRITIS

Yeoman, of London, Eng., used typhoid-paratyphoid vaccine, intravenously, in 50 cases of chronic arthritis and obtained improvement in between 80 and 90 percent, this improvement being maintained in between 50 and 60 percent. Yeoman also found that his therapeutic effects were in direct ratio to the degree of reaction induced.

The vaccine used contained two parts of typhoid and one part each of paratyphoid A and B. A dose of 100 million organisms was usually given at first, increased by the same amount in each subsequent dose. The bulk of the injection is brought up to 5 cc. with physiologic salt solution.—*Therap. Gaz.*, Feb. 15, 1927.

TASTE OF ARSPHENAMINE

The disagreeable odor and taste of which patients complain when receiving an injection of arsphenamine can usually be covered by placing a strong wintergreen or clove wafer on the patient's tongue or by letting him smell bay rum on a pledget of cotton.—*J. A. M. A.*

DEXTROSE INTRAVENOUSLY IN EPIDEMIC ENCEPHALITIS

Dextrose (glucose), given intravenously in daily doses of 300 to 500 cc. of a 10-percent solution, for 10 to 15 doses, followed by doses of 1½ ounces by mouth (in water with lemon juice) twice a day for an indefinite period, appears to exercise a distinct influence in mitigating the severity of epidemic encephalitis and in lessening later complications.—*DR. LELAND B. ALFORD*, in *J. Missouri St. M. A.*, June, 1927.

EPINEPHRIN IN STOKES-ADAMS SYNDROME

During the crisis of a long succession of severe seizures in a case of Stokes-Adams syndrome, subcutaneous injections of 0.5 cc. adrenalin (epinephrin) hydrochloride, followed five hours later by the injection of 1 cc., obtained a prompt cessation of the attacks and there was no recurrence for 10 days following, while the patient was in hospital.—*DRS. PATRICK, CHALMERS AND CRAWFORD*, in *Glasgow M.J.*, Sept., 1926.

MEASLES AND IMMUNE SERUM

Convalescent measles serum is valuable for the modification of measles, but not for its prevention.—*DRS. FREEMAN AND FREEMAN*, in *Arch. Pediat.*, Sept., 1926.

CARDIAC CONDITIONS AND "NEURASTHENIA"

A condition of "nonoptimal" cardiac functioning may often be responsible for chronic weakness, chronic exhaustive and

neurotic states in both young and old. Improvement or cure may often be effected by very small daily doses of digitalis or other cardiac stimulants, continued for 6 to 8 weeks or longer.—*DR. H. JANUSCHKE*, in *Wien. klin. Wchnschr.*, Jan. 20, 1927.

LIGHT AND EXPERIMENTAL SYPHILIS

Animals inoculated with *Treponema pallidum* and exposed to diffuse sunlight, artificial light and to darkness, showed different degrees of reaction to the infection.

In general, the efficiency of the reaction increased with the constancy of exposure.—*DRS. W. H. BROWN AND L. PEARCE*, in *J. Exper. Med.*, Mar. 1927.

ULTRAVIOLET IRRADIATION THROUGH GLASS

Ordinary window glass does not permit the passage of the ultraviolet solar rays.

New kinds of window glass which permit the passage of ultraviolet rays are now on the market and it will be possible to provide solariums for the treatment of rickets, dermatoses and other conditions in which ultraviolet irradiation is indicated.—*Internat. Med. Digest*, May, 1927.

RELIEF OF SEASICKNESS

If the external ear canals are carefully and firmly packed with cotton (by a physician, who knows how to do it safely), so that the sufferer is rendered completely deaf, the symptoms of seasickness are sometimes promptly and completely relieved.—*DR. B. SHERWOOD-DUNN*, Nice, France.

PREVENTIVES FOR SYPHILIS

The United States Public Health Service bulletin on *Venereal Disease Information*, issued August 20, 1926, states that Levaditi and Lazerac advocate a bismuth ointment preparation for the prevention of syphilis. This consists of 30 Gm. bismuthate of sodium and potassium and 30 Gm. of vaselin-lanolin. A powder made of the same salts has likewise been used.

The main advantage of the previously used liquid preventives is the dilution and mechanical removal by the fluid of many of the infective agents.—*Therap. Gaz.*, Feb. 15, 1926.

Current Medical Literature

BENZOCAINE (ANESTHESIN) WITH CHAULMOOGRA OIL IN LEPROSY

The value of chaulmoogra oil in leprosy has been established, but the subcutaneous method, which is the only way in which it can be tolerably injected, is very painful.

With a view to remedying this objection, Dr. F. A. Johansen, of the U. S. National Leprosarium, Carville, La., in *U. S. Public Health Reports*, Dec. 9, 1927, states that search was made to find and add some analgesic to the oil to allay the pain incident to repeated hypodermic injections.

Benzocaine (anesthesin) was the substance finally selected, on account of its nontoxic, non-habit-forming qualities and because, when united with the oil, it showed the least local inflammation.

Three Gm. of benzocaine are added to 10 cc. of olive oil and mixed; this is then added to 90 cc. of chaulmoogra oil and warmed to 70°C.; the oil mass is then agitated until all remaining crystals of benzocaine are dissolved. The mixture is filtered through filter-paper and then heated to 100°C. for one hour.

It was found that the maximum average, comfortably tolerated, dose was the semi-weekly injection of 5 cc. into the deltoid region, alternating with 8 cc. into the buttocks. The oil was completely absorbed within 48 hours, in the majority of cases.

Of 24 patients in the Leprosarium treated with the benzocaine-chaulmoogra oil combination consistently for 6 months, there were only 6 who complained of any after effects other than muscle soreness from the injection. Three abscesses developed, which promptly healed. Six of the 24 treated patients were markedly improved; 12 were moderately improved; 5 slightly improved; 1 remained unchanged.

There was a negligible amount of pain and only slight pressure discomfort following the injections.

Of course, no claim is made that the benzocaine-chaulmoogra oil combination will cure leprosy, but it does seem to relieve the patients and leads to complete and long-continued remissions.

ANKLE SPRAINS

In *Boston M. & S. J.*, July 21, 1927, Dr. Chas. P. Hutchins describes his method of treating ankle sprains. Continuous experience with his personal method of strapping, for the past twenty-three years, has always been the same—not a single day's absence from play or duty, with prompt repair process.

The essential of the method is the posture of the foot in relation to the leg. The

patient is seated upon a table in such way that his depending foot hangs 6 to 8 inches lower than the knee of the operator facing him. With adhesive straps, 1½ inches wide, cut to length, the patient's foot is placed upon the operator's knee so that the ankle is dorsally flexed to 80-85 degrees from the long axis of the tibia and rests the full weight of the extremity upon the head of the fifth metatarsal. This leaves the leg in straight alignment from hip to ankle joints and throws the foot into slight eversion.



The first strap runs spirally around the lower calf on the medial side, across the instep and cuboid and under the sole, falling into a natural sweep on the dorsum of the foot. This is the salient control of the hypermobility.

The second strap is a counterpart, applied in the opposite direction, acting to limit eversion and balancing the first. The third support is a stirrup from the middle of the calf and passes in the lateral plane of the ankle joint.

The fourth and narrow strip encircles the leg and retains the third support in contact with the leg at its isthmus above the malleolus.

It is imperative that the patient's leg be maintained in the same posture throughout the dressing and his muscle action inhibited.

Walking is instituted at once, with the foot carried in the four-square position—straight ahead. A little practice obviates any necessity for a limp.

Diathermy accelerates repair and abbreviates the dependence upon the plaster support. Daily removal of the plaster is required for this treatment.

The basis of this method is partial immobilization of joints to maintain torn ligaments in approximation and to nurture the reparative processes. Proper functional use is the most effective stimulant of repair.

CONTROLLING HEMORRHAGE IN TONSILLECTOMY

The public has a deeply rooted fear of hemorrhage in tonsillectomy.

In *M.J. & Record*, August 17, 1927, Dr. Walter A. Wells, of Washington, D. C., describes a method which he believes insures the control of this hemorrhage.

The method consists briefly in the placing of suture-ligatures in designated points by means of a specially devised instrument.

In this suture-placing instrument, a slightly curved needle is fixed to the end of one of the blades and, on closing the instrument and then opening it, a double thread can be instantaneously placed at any point in the tonsillar fossa.

Four such points are selected: The most important is at the upper pole, under the angle of the juncture of the two pillars; the point of second importance is in the lower pole of the tonsil, often close to the base of the tongue; if there is the least indication of bleeding, a suture should also be placed in the central area of the tonsil bed; the fourth point of importance is in the lower half of the posterior pillar. All these points correspond to places where vessels penetrate the fossa, or at least are most likely to be severed.

As the vessels in the tonsil area run in a vertical direction, it is most important that the sutures should be carried in a transverse direction; further, as the bleeding in the region of the upper pole comes from a descending vessel and all other bleeding points from ascending vessels the ligature in the first case should be placed above the bleeding point and in the second case below it.

By using these sutures, not only is safety from hemorrhage assured, but the operative time is shortened.

CALCIUM FEEDING IN NERVOUS DISEASES

The beneficial effect of calcium feeding in conditions where the serum calcium is lowered, has been utilized by pediatricists in many of the tetanics of infancy and childhood.

In *Minnesota Med.*, Dec., 1927, Dr. C. C. Gault, of Owatonna, Minn., describes the results of prolonged calcium feeding of 18 patients with functional nervous disorders, for periods lasting from 3 to 6 months. So far as possible no other drug treatment whatever was given, and evidence of organic disease was ruled out. Each patient received the equivalent of 20 grains (1.3 Gm.) of calcium lactate four times daily.

The results of treatment were quite uniform. Within 24 to 48 hours, the patient experienced a feeling of mental well-being, nervousness and apprehension disappeared and the feeling of fatigue so commonly complained of, was replaced by a physical fitness. In most patients the appetite was improved as well as the sleep. Four patients who had suffered from dull occi-

pital headaches stated that they had no recurrence while on calcium medication. In one patient a low systolic blood pressure was permanently raised to normal.

The results showed that there may be a more or less direct relationship between the functional nervous disorders and calcium metabolism and that in the milder neuroses a serious consideration of the calcium metabolism may be of definite value.

AMIODOXYL TREATMENT OF ARTHRITIS

Drs. R. L. Jeffery and K. S. Burns, of Seattle, in *Northwest Med.*, Dec., 1927, state that of 24 cases of arthritis—including 2 cases of gonorrheal arthritis—treated by amiodoxyl benzoate, 11 (46 percent) were completely relieved and have remained so; 9 cases were markedly relieved.

The most hopeful and satisfactory cases are those of the acute type of no long standing. Gonorrheal arthritis seems to give the best results of all.

The authors believe that amiodoxyl benzoate is the best single drug which has so far been developed for the treatment of arthritis. Their own experience is on a par with that of other clinicians cited.

VISUALIZATION OF THE GALL- BLADDER

In a paper by Dr. H. C. Herrman, of Louisville, in *Kentucky M. J.*, June, 1927, and its discussion, the general opinion showed that while the intravenous method of injecting dye gave a better roentgenogram, yet that the picture produced after oral administration of the dye was quite sufficient for clinical diagnostic purposes. One of the speakers remarked, "If we could devise means that would permit satisfactory disintegration and absorption of dyes when administered orally, I think there could be no question of difference of opinion among clinicians and roentgenologists as to which method should be universally adopted, because it is true that the oral method of administration presents far less likelihood of disturbances and distress to the patient than the intravenous method—* * *—If we could get our dye coated with something that would dissolve fairly rapidly and fairly certainly, I think we would all be of one accord regarding the oral method of administration being the one of choice".

GENTIAN VIOLET IN THRUSH

An epidemic of thrush (oidial stomatitis) in a hospital private nursery was traced to an unsuspected accumulation of dust, the removal of which was followed by cessation of the epidemic.

The prophylaxis of thrush consists in extreme care to avoid contamination with the infection.

In treatment of actual cases, better and more constant results were obtained with gentian violet than with any other substance. The dye should be freshly prepared in 1-percent, aqueous solution; treatment should be given at least one hour after feeding; the mouth should be cleansed with several cotton swabs to remove adherent mucus over all affected areas and the treatments should be continued once or twice daily for three successive days or longer.—DRS. H. K. FABER AND E. B. CLARK, of San Francisco, in *Am. J. Dis. Child.*, Sept., 1927.

INJECTIONS OF LIVE GONOCOCCI FOR GONORRHEA IN THE FEMALE

Dr. A. Loeser, of Berlin, in *Am. J. Obst. & Gynec.*, Sept., 1927, states that of 118 gonorrheal patients unsuccessfully treated previously in various ways, 68 were cured after a single injection of live gonococci; 5 others were cured after two or three injections.

The duration of infection in the cases varied from 5 months to 3½ years.

Gonococci obtained in pure cultures from the pus of an active gonorrheal patient and not more than 48 hours old were used. The germs were washed off in 3 cc. of sterile physiologic salt solution. Experience shows that the number of germs injected is of minor importance, so long as it does not sink below one or rise above eight thousand millions. The injection is subcutaneous and in the upper arm.

Only truly chronic cases of gonorrhea are suitable for treatment. Injections should not be made during the menstrual cycle and the patient should not have been treated in any other way for about two months previously.

EPHEDRINE IN ASTHMA AND HAY-FEVER

Drs. G. Piness and H. Miller, of Los Angeles, report in *J.A.M.A.*, Aug. 13, 1927, the treatment of 110 cases of asthma by ephedrine. The sulphate was used in dosage usually 50 mg. for adults and 25 mg. for children, always orally. While of considerable value in the symptomatic treatment, ephedrine sulphate fell short in its effectiveness as compared with epinephrin.

A study of the results of the use of ephedrine sulphate in 20 hay-fever patients shows that it is a drug of considerably greater value than epinephrin as a topical application. A 3-percent solution was used.

ANTITOXIN TREATMENT OF ERYSIPELAS

Bellevue Hospital, New York, maintains, perhaps, the largest erysipelas service in the world and is now using the antitoxin treatment to the exclusion of other methods. Drs. D. Symmers and K. M. Lewis,

in *J.A.M.A.*, Sept. 10, 1927, give their observations on 131 cases.

The antitoxin used is obtained from immunized horses, injected with erysipelas toxin and with erysipelas streptococci isolated from typical cases of erysipelas. The dosage used in treatment varies in each case and is determined by several factors; but as a routine a patient receives an injection of 25 cc. of their specially prepared antitoxin mixture on entering the hospital. The disease has been controlled following one to three injections.

Generally the patient's period of disability has been reduced by more than 50 percent.

Facial erysipelas responds more readily to the antitoxin treatment than erysipelas of the trunk or extremities. In a series of 111 facial cases treated at Bellevue Hospital, 85.6 percent of the patients were cured in from three to seven days. In comparison with this in a series of 92 cases treated previously at the hospital, with other measures than antitoxin, 33.7 percent of the patients were cured in from two to seven days and 47.8 percent were cured in from eight to eighteen days.

The antitoxin is injected intramuscularly and the authors think that intravenous injections should be used only in desperate cases.

EPHEDRINE AND WHOOPING COUGH

In *Am. J. M. Sc.*, Dec., 1927, Drs. W. D. Anderson and C. E. Homan, of Chattanooga, Tenn., report that ephedrine hydrochloride gave relief from spasmodic cough and vomiting in 18 of 20 cases of definitely diagnosed whooping cough in which it was used.

The ephedrine was administered in an aqueous solution by mouth. One-fourth grain (0.016 Gm.) was given to children over one year old and ¼ grain (0.008 Gm.) to those younger, usually at night and morning. No other drug treatment was given.

In all improved cases some cough remained, which did not, however, show any of the characteristics of whooping cough. No serious toxic symptoms were noted and there were no complications.

The authors think that the drug is most useful during the second stage. Smaller dosage would probably give relief without any toxic symptoms.

SIMPLIFIED TEST FOR ALLERGIC ASTHMA

Specific protein sensitization tests in cases of bronchial allergic asthma are tedious and troublesome. There is no known way of determining beforehand whether a case of asthma is allergic or not.

Dr. Samuel M. Feinberg and associates, of Chicago, in *Ann. Clin. Med.*, June, 1927, give their experience in a small number of clinical cases of bronchial asthma which

were tested for allergy by the van Leeuwen single test. Van Leeuwen, in 1926, found that nearly all asthmatics were sensitive to human dander extract. Tests with this substance are positive in 90 to 95 percent of allergic, but never in normal persons.

The preparation consists of 1 Gram of free human dander added to 100 cc. of physiologic salt solution, filtered and sterilized, to which enough phenol is added for a final concentration of 0.5 percent. The intradermal test is carried out in the same way as with other proteins. In the present author's series, this test for allergy was positive in 100 percent of proved allergic cases and negative in all cases of bronchial asthma which did not show any positive protein skin tests.

HIGH BLOOD PRESSURE AND FOCAL INFECTION

In *M. J. & Record*, Sept. 7, 1927, Dr. L. Napoleon Boston, of Philadelphia, gives the clinical data regarding 20 patients between 30 and 50 years old and 25 patients of over 50 years, all of whom showed a systolic pressure exceeding 200 mm. These are selected cases in which any other pathologic condition than the presence of a focal infection could be excluded.

The important clinical symptoms, vertigo, cephalgia, abdominal angina, mesenteric angina, etc., observed in these cases are described.

Twenty-two of these patients were cured, 13 improved and 9 unimproved after removal of the infecting focus. By cured is meant that the blood pressure was restored to normal, with the disappearance of annoying symptoms, verified for at least a year following treatment.

The character of the focal infections differed widely in these cases, but there was no doubt of the direct connection.

THE ENDOCRINES AND EAR AFFECTIONS

Various organic and functional troubles can be traced to endocrine dysfunction. That certain ear affections can originate in this way seems most probable to Dr. H. Lyons Hunt, writing in *Med. Times*, August, 1927.

A survey of literature shows that deafness may be one of the manifestations of thyroid deficiency; this may also cause infiltration and thickening of the tympanic membrane, middle ear and eustachian tube. It has been maintained that in over fifty percent of cases of progressive, systemic deafness there is distinct endocrine dysfunction.

As regards otosclerosis, certain endocrine glands seem to have influence over calcium metabolism. The thyroparathyroid mechanism may be considered as the opsonin of the body and directly connected with calcium deposition.

In cretinous states, in addition to thyroid extract, calcium lactophosphate and also

thymus gland extract may be indicated. Indolence in healing, in both acute and chronic otitis media or mastoid affections, is an indication for thyroid extract, with pituitary or suprarenal gland as aids to local medication. Calcium lactate enhances endocrine action in these cases.

MIGRAINE AND NEUROPATHY

There is a widely held view that migraine is associated with a neuropathic constitution.

For the sake of comparison, Dr. Wm. Allan, of Charlotte, N. C., investigated the records of 4000 neuropathic and psychopathic cases and those of 400 cases of known migraine.

In *Arch. Neurol. & Psychiat.*, Oct. 1927, Dr. Allan states that psychoses, psychoneuroses and epilepsy occur with the same frequency in migrainous as in nonmigrainous persons.

Migraine has not been observed to descend by heredity from anything but migraine in the parents. More than 90 percent of Allan's migrainous patients gave a history of migraine in one or both parents; with one parent migrainous, half the children have been found migrainous; with both parents migrainous more than three-fourths of the children have been migrainous.

Migraine seems to be a condition entirely independent of the neuropathies.

ETIOLOGY OF DIARRHEA IN CHILDREN

In the Cleveland City Hospital and Lakeside Hospital, Dr. C. Krentz carried out investigations having for their object the establishment of the relationship of infantile diarrhea with an organism found in the stools. The results are published in *Am. J. Dis. Child.*, Oct. 1927. The first method used was to try if d'Herelle's bacteriophage theory held good in these conditions; namely, that in disease, particularly in intestinal disease, a bacteriophage is developed in the body as a protective mechanism against the organism etiologically related to the condition.

It was found that the incidence of the bacteriophage in the stools of children with diarrhea of unestablished etiology is greater (45 percent) than in children with normal stools (16 percent). The action of the bacteriophage obtained from the stools of these patients did not give any indication of the possible etiologic relationship to the disease of any organism isolated from the diarrheal stools.

The second mode of investigation was that of repeated skin tests with the filtrates of 18-hour broth cultures of each variety of organism obtained from diarrheal stools.

It was found that in a series of children with diarrhea of unestablished etiology, whose stools contained pus, blood and mucus, a positive skin reaction was obtained to the broth culture filtrates of

one or more strains of *B. coli* which had been isolated from the stool. After the stools became normal, the skin reaction became negative to one of these strains but continued to be positive to all others which had previously been positive. The strains that gave negative reactions during the disease remained negative subsequently.

RADIUM IN NEOPLASMS OF UPPER AIR PASSAGES

The surgical treatment of fibromas of the nasopharynx is attended with hemorrhages and frequent recurrences. Dr. G. Allen Robinson, of New York, in *J.A.M.A.*, Sept. 3, 1927, says that radium treatment is safe and gives good results.

A 50 mgm. radium tube is applied to the pedicle of the growth for 6 hours, to shrink the tumor and decrease the blood supply. After two or three weeks, platinum radon seeds are inserted into the tumor, with little or no danger of hemorrhage. Radiation necrosis of the tumor must be avoided.

In polypoid ethmoiditis, surgery alone often fails to cure and it is best to apply radium (50 mgm. capsule), postoperatively, to the ethmoid area for 2 to 4 hours, repeating in about 2 weeks. Experience in nearly 40 cases has shown that headaches, discharges and asthmatic attacks have been relieved and the sense of smell restored.

The action of radium in rhinoscleroma is to produce dense fibrous tissue to replace the granulation meshwork in the submucosa.

In malignant tumors of the sinuses, radium is best employed after the mass has been removed. Intense gamma radiation is given.

THE PERSONALITY OF AVIATORS

The "personality" study of aviation candidates, as outlined at Hazelhurst Field, L. I., New York, as described by Maj. F. H. Poole, M. C., in *Milit. Surg.* for October, 1927, embraces the following:

- 1.—To study the condition of the candidate's nervous system—especially to find if there are abnormalities which unfit him, temporarily or permanently, for flying.
- 2.—To study his mental organization as to temperament, intelligence and volition.
- 3.—To determine the candidate's manner of reacting to his environment and if his reactions make for efficiency or inefficiency.
- 4.—To determine, so far as possible, the existence of latent tendencies which, under the stress of actual flying, might become so accentuated as to make him inefficient and tend toward mental and nervous breakdown.
- 5.—In a general way to determine personality trends, resistances and potentialities.

The study includes phylogenic components and environmental reactions

which suggest the settled behavior policies of the individual.

Personality includes physical and physiologic examinations.

Heredity, play, sex, educational and disciplinary factors and habits all are inquired into and determine the individual's psychologic type, whether introvert or extrovert or with modifications.

For flying, considerable stress must be placed upon reactions following upon the activation of the fundamental instinct of self-preservation. Normal responses, with ability to make rapid and good judgments when in danger, are indispensable qualities in the flyer.

There is a natural aptitude for flying; but the exact standards by which it can be measured in advance have not yet been fully determined.

CARE OF CHILDREN BY THE GENERAL PRACTITIONER

According to Dr. F. C. Neff, in *J. Kansas M. Soc.*, Sept. 1927, the care of children by the general practitioner includes the direction of the proper feeding of infants, the nutrition of children of all ages, the prevention of communicable diseases and other infections, the timely diagnosis of surgical conditions and the treatment of emergencies.

Regarding infant feeding, when breast milk is not sufficient, the following formula should be used: boiled whole milk, 12 ounces, soured with a buttermilk tablet or with U.S.P. lactic acid, 2 drops for each ounce; water (boiled) 4 ounces; and sugar or syrup 1 ounce. So much of the formula can be prescribed as to insure a gain in weight of about 7 ounces a week.

All children should be weighed and physically overhauled at least once a year. Special precautions should be taken in regard to epidemics and tuberculosis; and particularly against exposures to epidemic colds.

Surgical intervention is of the utmost importance. Tongue-tie should be left alone on account of hemorrhage. Harelip, tonsils, adenoids, pyloric stenosis and any other conditions that call for surgery should be carefully considered and the children operated upon, when necessary, as early as possible.

TOYS IN THE PEDIATRICIAN'S OFFICE

Toys should form a part of the pediatrician's armamentarium. First, they help to win the child's confidence and his acquiescence in the doctor's investigations; second, the child's approach to toys will often give an inkling to character and behavior traits; third, certain type of toys mechanically perform actions which the doctor wishes the child to imitate; fourth, correct habits can often be inculcated and impressed on the child through the medium of toys.

The character formative age is not that of adolescence, but the first six years of childhood.—Dr. Jacob Sobel, New York, in *Clin. Excerpts*, Sept. 1927.

ULTRAVIOLET IRRADIATION IN EYE DISEASES

Dr. I. Spiro, in *Eye, Ear, Nose and Throat Monthly*, Sept., 1927, reports very good results in cases of phlyctenular keratoconjunctivitis, blepharitis, corneal ulcer, etc., by combining systemic actinotherapy with local treatment. The trunk, both back and front, is exposed at the first treatment for two minutes—or only one minute in children under 3 years old. The second exposure is the same as the first. At the third and subsequent exposures the dose was increased, up to maximum time of exposure of 15 minutes each, back and front. The general aim is to produce a mild erythema.

PAGET'S DISEASE OF NIPPLE

Dr. J. M. Wainwright, of Scranton, in *Am. J. Surg.*, September, 1927, says that Paget's disease of the nipple is a distinct entity due to disturbance of nutrition from permeation of a deeper-lying cancer. It is not a neoplasm, especially a squamous-celled epithelioma, of the nipple, which is often, if not always, associated with carcinoma of deeper portions of the breast.

The association of Paget's disease is not adequately explained by spread, either direct or by the lymphatics. It is adequately explained only by Gye's hypothesis; i.e., that there has been some change in the breast which produces Gye's specific substance. This hypothesis can alone explain how different lesions can occur throughout the affected breast.

OBESITY TREATMENTS

Ninety-nine percent of obesity is of the exogenous type, according to Dr. H. J. John, of Cleveland, who, in *M. J. & Record*, Oct. 19, 1927, points to the dangers of obesity itself and of its treatment.

Fat people have little or no resistance to infection; they are bad surgical risks; their mortality is high; they are uncomfortable; they have little or no endurance; they are a ready prey to diabetes and other calamities may befall them on account of their obesity.

The only method of treatment of obesity (thyroid extract) which has appeared to promise appreciable results is fraught with danger of producing hyperthyroidism or diabetes, except in the very small percentage of cases of the endogenous type; and there are rarely criteria by which, at the onset, it can be determined whether in an individual case obesity is of the endogenous or exogenous type.

The only efficient method for dealing with obesity is—prevention. Exogenous

obesity can be prevented with little trouble or expense. The present propaganda against obesity should be encouraged, but at the same time guided by the medical profession. The public should be taught to avoid advertised cures for obesity (most of which contain thyroid extract) and also excessive and dangerous abstemiousness and exercise.

Danger lurks in the path of every type of advertised treatment.

MYRTILLIN (BLUEBERRY LEAF EXTRACT) FOR DIABETES

In *J.A.M.A.*, November 5, 1927, Dr. F. A. Allen refers to the value of blueberry leaf extract—now known as myrtillin—in hyperglycemia. Blueberry leaf tea has been a popular remedy, in Europe, for diabetes mellitus.

Experimentally, myrtillin has been demonstrated to reduce alimentary glycosuria and hyperglycemia in normal dogs; to reduce glycosuria and prolong life in depancreatized dogs; and to reduce or abolish glycosuria in diabetic patients. It is not insulin nor a substitute for insulin; it is uncertain in its power and effects; and, while it possesses the power referred to, it cannot always be relied upon to exert it and therefore much dependence should not be placed upon its use, except perhaps as an accessory treatment.

HYPERESTHETIC RHINITIS AND MYXEDEMA

In *Ann. Otol. Rhinol. & Laryngol.*, Sept. 1927, Dr. Frank J. Novak, Jr., expresses his opinion, based on facts observed in 20 personal cases studied by him and the opinions expressed by others in the literature, that it is very probable that hyperesthetic rhinitis is a symptom of a localized type of thyroid myxedema in which most of the changes are evident in the nasal mucosa.

In support of his opinion Dr. Novak especially emphasizes the constant low basal metabolic rate; the pale, flabby, swollen nasal mucosa; the fact that these patients usually showed the clinical characteristics associated with hypothyroid secretion; and that nearly all were relieved of their nasal symptoms by opotherapy.

THYROID MEDICATION

Apart from the classical myxedema and cachexia strumipriva, Prof. F. Mueller, Munich, emphasizes, in *Endocrine Survey*, Oct., 1927, the following indications:

With some young women, the neck becomes strikingly thin and hollow after the birth of the first or second child, evidently for the reason that pregnancy caused exhaustion and atrophy of the thyroid gland.

Further, abortive forms of myxedema are not infrequently seen in elderly

women who consult the doctor on account of their mental and physical tiredness. They feel cold and long for warmth; their skin is dry; they feel that they are growing indolent, incapable of making up their minds, have a tendency to become stout, especially on the hips; their sexual impulse has very much decreased; serious books, concerts, lectures, no longer afford them pleasure. In some cases there is also considerable anemia with higher color index. In cases of this kind, from $1\frac{1}{2}$ to 3 grains of dried thyroid gland, daily, usually suffices to remove the symptoms and especially to stimulate the psychic interests.

The same doses, given consistently, may further have an astounding curative effect in ichthyosis, psoriasis, and above all, in scleroderma (especially *sclerodermie en plaques*); also in some chronic articular diseases, in obstinate edema due to disease of the kidney and in obesity.

TONSILLECTOMY SEQUELLAE

There seems to be no doubt that serious complications—hemorrhage, pulmonary abscess, etc.—not infrequently follow tonsillectomy. In *M. J. & Record*, April 6, 1927, Dr. C. C. Rice mentions a severe grade of dry pharyngeal post-nasal catarrh, which may injuriously affect the speaking or singing voice, as another result of the radical operation.

This dry catarrh also may be a predisposing cause of colds in the head and, incidentally, the dry pharynx may bring about a catarrhal condition of the middle ear.

A tonsillotomy, in Dr. Rice's opinion, when properly done, suffices often to remove over-enlargement and is not followed by dryness and anatomic deformity; or the electro-cautery can be used here effectively when congestion is to be reduced and follicles destroyed. Especially in adults and particularly in those who use their voices professionally, Dr. Rice prefers to avoid tonsillectomy (excision of tonsils, capsule and all) unless this operation is an actual necessity.

CALCIUM DEFICIENCY IN THE BLOOD SERUM

Previous investigations have shown that there is a decreased serum calcium content in most disease states, and that an increase of serum calcium brings about improved clinical conditions. It is also known that administration of thyroid extract in pathologic conditions produces a relapse and a decrease in serum calcium.

Dr. H. W. C. Vines, of the Pathological Laboratory, Cambridge University, Eng., in *Endocrinology*, July-Aug., 1927, states that experimentally he has established that the administration of ammonium oxalate prevents or retards the inhibitory effect which thyroid extract exerts on the replacement of serum calcium from the tissues.

The intravenous injection of oxalate into rabbits is followed by a rapid replacement

of the calcium removed from the serum; if given in small, repeated doses the rate of replacement varies as the oxalate dose, but there is evidence that the replacement rate does not rise above 0.125 per minute per kilogram.

HEALING OF PEPTIC ULCER

Dr. Karl L. Thorsgaard, of Chicago, in *Illinois M. J.*, November, 1927, says that, in the conservative therapy of peptic ulcer, emphasis must be placed on early and accurate diagnosis, the type of lesion, its location, the extent of structural damage and such complications as respond to medical therapy and afford reasonable assurance of healing.

The outstanding indication for the healing of ulcer is rest in bed and an accurate control of the adverse factors that influence digestive activity.

It is important to institute a follow-up system to prevent recurrence. An extended period of health supervision, an occasional gastric analysis, stool examination and fluoroscopic observation is considered essential for permanent results in the control of peptic ulcer.

A physician treating ulcer must study the various sociologic and etiologic aspects of dyspepsia, as manifested in present-day life. Modern living conditions too frequently lead to digestive troubles and loss of health.

DELAYED DENTITION AND THYROID DEFICIENCY

The causes of delay in the eruption of the teeth are sometimes embryologic and sometimes nutritional or chemical. The textbooks give the commonest causes as malnutrition, rickets and cretinism.

In *Am. Med.* for April, 1926, Dr. William N. Berkeley calls attention to the fact that, in cretinism, dentition is *always* delayed, and suggests that minor thyroid deficiency is the chief cause of this condition. He arrives at this opinion from considering the facts that the eruption of teeth is a matter of development rather than of growth; and that, in babies in whom delayed dentition is the only sign of abnormal development, minute doses of thyroid substance often produce astonishing results.

THE WORLD'S HEALTH

According to *Health News Bulletin D-22*, just issued by the U. S. Pub. Health Service, the health of all the population of those parts of the world for which dependable reports are available was generally better during the year 1927 than for any previous year for which records are available. There was no spread of infectious diseases into areas where public health administration is well established.

The first half of 1927 was generally characterized by unusually low death rates for foreign countries from which reports were

received. In Germany, the 1926 urban death rate reached the low level of 10.3 per thousand.

The most serious condition that interfered with attaining low mortality rates was the epidemic of influenza which affected the greater part of Europe in 1925-26. The Health Section of the League of Nations estimates that up to March 1926, this cost 100,000 lives.

Bubonic plague and cholera are still rife in India and Eastern Asia.

Yellow fever was confined to one section of Africa. Typhus has considerably decreased in places where it was endemic.

A mild type of smallpox was more prevalent in England and France than in previous years.

The control of typhoid fever has not been marked by progress.

Statistics of tuberculosis mortality in the larger European cities indicate a decline from the 1926 rate and the general trend of this disease is encouraging.

COLLECTIVE ULTRAVIOLET IRRADIATION

In the *Bull. de la Soc. de pédiat. de Paris*, Mar.-May, 1927, Dr. P. Duhem describes a method which he has devised by which 6 patients can be treated at the same time and receive an equal amount of ultraviolet radiation.

The apparatus used consists of a large table at which 6 persons may be placed. On each side of the table is a large lamp mounted on a metallic bar (on which it can slide), fastened to the table. Thus the position of the lamp can be changed to any point along its sliding line. By changing the positions of the lamps at stated intervals during the seances it is arranged that the total amount of radiation intensity is the same for each of the 6 subjects in the whole period of the seance.

DERMOGRAPHIA AND DYS-THYROIDISM

In *Am. Med.*, Sept. 1927, Dr. Maximilian Kern, of Chicago, attempts to show that there are reasonable grounds for the classification of dermographia as an endocrine manifestation especially denoting thyroid dysfunction. The thyroid secretion regulates the morphogenesis and trophic ex-

changes of the skin, as it does those of other tissues.

Hypothyroidism is associated with decreased peripheral blood supply, decreased sensitiveness to thermal regulation and decreased dermal gland secretion. Hyperthyroidism is associated with an erythematous and hypersensitive skin. Hypersensitiveness of the skin is well known, clinically, to accompany conditions which are constantly symptomatic of hyperthyroidism.

Dr. Kern cites literature to show that dermographia, urticaria and eczema are associated with thyroid dysfunction. Dermographia may be considered as a manifestation of allergy, and this allergy itself is a cutaneous hypersensitiveness of the skin due to thyroid dysfunction. Of 345 persons observed by Dr. Kern, showing one of the three conditions, erythema, urticaria or eczema, 41 percent gave a history of hereditary allergic disturbance.

CERVICAL SYMPATHECTOMY IN ANGINA PECTORIS

The operation of cervical sympathectomy for angina pectoris, first executed in 1916 by Jonnesco, did not meet with favor by the mass of internists. Later modifications of the procedure have been more popular.

Dr. Elliott C. Cutler, of the Department of Surgery Western Reserve University, in *Ann. Clin. Med.*, May, 1927, gives the results in 50 selected cases in which the diagnosis was arrived at after thorough preoperative study, and in which the patient has been closely followed post-operatively for at least six months.

With simple superior cervical sympathectomy, 43.7 percent of the cases were definitely improved and 12.5 percent somewhat relieved.

With the complete Jonnesco operation, 64 percent were definitely bettered and an additional 8 percent improved.

While the operation is not curative for angina, but merely relieves the intense pain, the author thinks that, at the present time, the complete operation of Jonnesco, on both sides, offers the greatest hope of lasting relief.

The author's experience shows that a complete unilateral Jonnesco operation is well borne by these patients, although it may be wise, in selected cases, to perform the simpler superior cervical sympathectomy as a first stage to a later complete removal.

New Books

WIGGAM: FUTURE OF MAN

THE NEXT AGE OF MAN. By Albert Edward Wiggam, Author of *The New Decalogue of Science, The Fruit of the Family Tree*. Indianapolis: The Bobbs-Merrill Company. 1927. Price \$3.00.

Wiggam's two former books have provoked wide and active discussion among thinking people all over the world, and this new one is like to produce even more spirited comment.

The chapter headings outline his thesis: (1) Can We Remain Civilized?; (2) The Modern Man, His World and His Problem; (3) The Four Corner Stones of Race Progress; (4) Are We Winning the Human Race?; (5) Who Makes Progress?; (6) Our Vanishing Leaders; (7) The Next Age of Man.

In his earlier chapters he traces the biologic history of evolution and shows that no legal enactments or revolutionary episodes have ever succeeded in raising the moral or political tone of a race or nation, and makes the statement that civilization is always in danger, in proportion as it is guided by emotion instead of intelligence.

He shows how the optimist, the pessimist, the conservative and the radical are useless as instrumentalities for sound and permanent race betterment, and announces some keenly epigrammatic definitions of these classes of people. Here occurs the penetrating statement, "Men attain goodness and welfare only to the degree to which they obey nature's laws."

His discussion of the mechanism and powers of heredity is interesting and illuminating, if not, as we believe, always entirely sound. It gives a rational basis for what follows. This is his first "Corner Stone"; the second is the non-inheritance of acquired characters; the third is that good qualities tend to be associated with each other in the natural make-up of men and women; and the fourth, the tendency of like to marry like.

The handling of the various subjects he takes up is interesting to a degree, but the last chapter is, in many respects, the most fascinating of all. Here he outlines the probability of the development, within comparatively few years, of a method of *biologic* (rather than chemical or mechanical) birth control, by utilizing the power of the luteal hormone to suspend the function of ovulation, and predicts that this will soon be readily available to all classes of people.

With the coming of this knowledge and power, the scatter-brained and irresponsible elements of the population will elect not to assume the burdens of parenthood

and their type will soon die out. This will leave reproduction in the hands of the more substantial and worthy elements of the population and result in the breeding of a new race of men who will be *naturally* civilized and will require a minimum of control by regulatory laws and police.

Wiggam is a trained and able writer who understands how to get the full power out of the English language; and withal he is a keen and penetrating thinker. His turns of phrase are clever and striking and his reasoning, in the main, logical and cogent. He is always stimulating, whether one agrees with all of his statements or not. He shatters many hoary superstitions and commonly accepted beliefs and our thinking will be clearer for this iconoclasm.

We heartily recommend this book to all thoughtful people who enjoy reading something meatier than the novel of the moment, especially if they have any serious interest in the future of the human race. It is enlightening without being dry, and not so heavy as to prevent the reader being carried along by its sustained interest.

Truly, a book worth reading—and studying.

MONTAGUE: POPULAR PROCTOLOGY

TROUBLES WE DON'T TALK ABOUT! By J. F. Montague, M.D., F.A.C.S., of the University and Bellevue Hospital Medical College; Lecturer on Rectal Pathology; etc. Illustrated. Philadelphia: J. B. Lippincott Company. 1927. Price \$2.00.

Popular books on hygiene and various phases of medicine are increasing in numbers, but this is the first one we have seen dealing with rectal diseases. It is a subject which needs discussion.

Dr. Montague is well qualified to write on proctology and has handled his material in a manner which should give no offense to anyone. He considers hemorrhoids, abscess, fistula, pruritus, incontinence, stricture and various other conditions and warns of the danger of cancer, which results from neglected rectal diseases.

There are chapters on the various types of laxatives—pills, bran, mineral oil, etc.—and on colonic irrigations and various other "home remedies", all of which the author considers open to adverse criticism, except posture in bed, the hot sitz bath and properly given enemas.

The book is written in a brisk and clever style and contains much information which should be more widely disseminated. It would seem, however, that the purpose could have been accomplished as well without going into quite such detailed descriptions

of the technic of rectal examinations and some forms of treatment which should always be applied by a physician.

It seems probable that the book will be rather widely read by laymen, and many physicians will find it interesting and instructive.

MCLESTER: NUTRITION AND DIET

NUTRITION AND DIET IN HEALTH AND DISEASE. By James S. McLester, M.D., Professor of Medicine at the University of Alabama, Birmingham, Alabama. Philadelphia and London: W. B. Saunders Co. 1927. Price \$8.00.

In looking over Dr. McLester's book one is struck especially by the saneness and conservatism which marks the author's attitude in regard to nutrition and diet in general.

In the past few years there has been a great deal of what might be termed "mushy" writing on the subject of special feeding in specific states, which may or may not be considered pathologic, according to the viewpoint of the writer. As the "normal man" is more of a conception than a reality, we might all be considered pathologic and all, according to certain authorities, be placed on special diets.

Dr. McLester is evidently no faddist. His views on nutrition are based on the broad facts of physiology and the normal needs of the organism. He believes in regular meals of the usual type, modified only according to known and definite pathology. Dr. McLester is not afraid to say that he does not know in cases in which our knowledge of certain conditions is vague, an attitude which might be adopted with profit by others concerning the disordered conditions underlying which very little actual knowledge is available.

In the first part of his book, Dr. McLester deals with nutrition and diet in health. Part II deals with nutrition and diet in disease, and we would specially like to refer to the conservative tone adopted in the handling of obesity and diseases of the digestive organs.

Part III, which is short, contains tables and charts of a general nature.

The book has been written from the point of view of the physician rather than from that of the dietitian, and practitioners will find the whole subject treated with clarity and that conservatism, without faddism, which results from experience and close observation.

HAZEN: DISEASES OF THE SKIN

DISEASES OF THE SKIN. By Henry H. Hazen, A.M., M.D., Professor of Dermatology in the Medical Department of Georgetown University; etc. Third Edition. Two Hundred Forty-Eight Illustrations, Including Two Color Plates. St. Louis: The C. V. Mosby Company. 1927. Price \$10.00.

Dr. Hazen's book was originally designed to fill the gap between the voluminous textbooks and the too-short synopses available for students and practitioners. It is an excellent practical compend for the general practitioner on the subject of the commoner skin diseases, and is well illustrated.

In the present (third) edition the book has been thoroughly revised, especially as regards the etiologic classification of many skin diseases formerly considered as of uncertain origin. It is observed that Dr. Hazen definitely classes urticaria as a toxemic disease, but we are not quite sure that this etiology has been anything like universally accepted.

Those who treat skin diseases more or less frequently, in the course of general practice, will find that this work meets their needs satisfactorily.

CRAFTS: ENCEPHALITIS

EPIDEMIC ENCEPHALITIS (ENCEPHALOMYELITIS). By Leo M. Crafts, B.L., M.D. (Harv.), Formerly Dean and Professor of Nervous and Mental Diseases, Medical Department of Hamline University, Minneapolis, Minn. Illustrated. Boston: Richard B. Badger, Publisher. 1927. Price \$3.00.

Dr. Craft's book is a monograph containing the past and present history of epidemic encephalitis. The symptoms, diagnosis, complications and treatment are dealt with in separate chapters.

A feature of the work is a large number of case reports illustrating various aspects and phases of the disease.

THE CANNING INDUSTRY

SCIENTIFIC RESEARCH APPLIED TO THE CANNING INDUSTRY. Bulletin No. 109-A. National Cannery Association, Washington, D. C. Sent gratis.

Considering the very great proportion of canned foods which enters into the daily dietary of Americans, the subject of canning ought to possess a great interest for the American doctor.

On looking into the above booklet one is surprised to learn what might be termed the extraordinary care with which every phase of the canning industry is surrounded, and the large sums which are spent annually by those engaged in it in the pursuit of special research problems.

This bulletin reviews concisely the studies of tin plate for cans, causes of "springers" and "swells," storage temperatures for canned foods, technologic operations in canning, the processing of canned foods (including heat penetration, heat resistance of bacteria, definition of adequate processes, sources of spoilage bacteria, etc.), and the nutritive value and wholesomeness of canned foods, including vitamins, ptomaine poisoning and botulism. It also briefly describes the agricultural research institutions, and furnishes illustrations of what has been done in the

field of entomology, plant pathology, horticulture and plant breeding for the betterment of canning crops.

MEDICAL EDUCATION

METHODS AND PROBLEMS OF MEDICAL EDUCATION. (*Eighth Series.*) New York City, 61 Broadway: The Rockefeller Foundation, Division of Medical Education. 1927. Sent gratis on request.

Methods in medical education are constantly changing and, for those who are planning new institutions or remodeling old ones, it is not easy, without extensive travel and research, to find out what are the latest ideas and those best suited to their requirements.

In this monograph, the Division of Medical Education of the Rockefeller Foundation publishes brief descriptions of clinics, laboratories and methods of teaching medical subjects in different parts of the world. It is one of a series of similar monographs which have been or will be published from time to time.

The work is extensively illustrated, including plans and the arrangement of armamentarium, and will undoubtedly be of great value to those interested in the subject of medical teaching.

COWAN: OPHTHALMIC OPTICS

AN INTRODUCTORY COURSE IN OPHTHALMIC OPTICS. By Alfred Cowan, M.D., Assistant Professor of Ophthalmology, in the Graduate School of Medicine, University of Pennsylvania. With 121 Illustrations in Colors. Philadelphia: F. A. Davis Company. 1927. Price \$3.50.

This is a simple textbook of ophthalmic optics designed to convey a working knowledge of the subject to students and practitioners, especially those who have only an elementary knowledge of mathematics.

The problems of reflection and refraction and their practical application in the fitting of lenses are dealt with in a manner which can be easily followed and understood.

STRAUSZ: KIDNEY DISEASES

DIE NEPHRITIDEN UND NICHTENZÜNDLICHEN NIERENERKRANKUNGEN. Ihre Diagnostik und Therapie. (*Nephritis und Non-Inflammatory Diseases of the Kidneys. Their Diagnosis and Therapy.*) By Prof. Dr. H. Strausz, Berlin. Fourth Revised Edition. Berlin, Germany, Friedrichstrasse 105 B: Urban & Schwarzenberg. 1927. Price Mk 21.

Those internists who have watched the progress of investigations concerning the obscure problems of albuminuria, nephritis, nephroses and similar conditions not distinctly surgical in character, will welcome this volume and the volume reviewed below as additions to the literature of utmost scientific value.

The present volume, of nearly 400 pages, is divided into two parts. In the first part, devoted to diagnosis, is described all means of blood chemistry, functional tests, the uremic and pseudo-uremic conditions, fundus findings, the cardiac stasis of the kidneys, etc. The section of differential symptomatology will prove especially helpful to general practitioners.

The therapeutic part presents no miracles, but this, too, is worked out systematically, based on the available scientific data. In almost half of the volume the author takes up symptomatic treatment by rest, baths, diet, medication, roentgenotherapy, surgery, and finally deals with the management of certain special symptoms and complications. The volume concludes with an appendix dealing with the prevention of nephritis, the composition of the most important foods and drinks and the principal chemical ingredients of the most popular European mineral waters.

G. M. B.

MUNK: NEPHROSIS AND NEPHRITIS

PATHOLOGIE UND KLINIK DER NIERENERKRANKUNGEN (NEPHROSEN, NEPHRITIDEN UND SCHRUMPFNIEREN). [*Pathology and Clinic of Diseases of the Kidneys (Nephroses, Nephritides and Cirrhosis of the Kidneys).*] By Dr. Fritz Munk, Professor of Internal Medicine at the University of Berlin. Berlin, Friedrichstrasse 105 B: Urban and Schwarzenberg. 1927. Price 30 Mk.

In this volume we find that pathology is stressed. After a brief review of the anatomy and physiology of the kidneys, the urine is discussed physiologically and pathologically. Throughout, the pathologist does not forget the clinician and always there is an eye on the therapeutic utility of the pathologic studies.

Seventy-two illustrations and four plates in colors add to the value of this work because they show the different pathologic structures as seen under the microscope.

As compared with the volume by Strausz, the present one presents much overlapping of matter and discussions, but from the purely pathologic aspect, this volume provides a fund of knowledge which will satisfy even the most painstaking and scientific clinicians. Both volumes together present the last word on the inflammatory and non-inflammatory diseases of the kidneys.

G. M. B.

CROW: EAR, NOSE AND THROAT

THE EAR, NOSE AND THROAT IN GENERAL PRACTICE. An Informal Guide to the Main Principles. By D. A. Crow, M.B., Ch.B. (Edin.), Oto-Laryngologist, The Royal Sussex County Hospital, Brighton; The Sussex Throat and Ear Hospital, Etc. London, New York, etc.: Humphrey Milford, Oxford University Press. 1927. Price \$3.25.

A handy epitome of ear, nose and throat conditions which is intended for the general practitioner to use in his daily practice.

The book has the advantage of being written by one who, though now a specialist, spent ten years in general practice first. The point of view of the general practitioner is therefore sympathetically dealt with.

HODSON: ANGELS AND MEN

THE BROTHERHOOD OF ANGELS AND OF MEN. By Geoffrey Hodson. Foreword by Annie Besant. London: The Theosophical Pub. House, Ltd. (Through The Theosophical Press, Wheaton, Ill.) 1927. Price \$1.50.

The existence of non-human beings, some at a lower stage of development than that of the average man and others much more highly developed, has been recognized by all the great religions of the world and by the great artists and seers of every land and time. The advanced beings of this group are known, in Christian terminology, as angels.

This little book is an attempt to describe these beings and give some idea of their powers and activities. The author claims to be able to see them and writes with much conviction. In fact, much of the contents of the volume purports to be a message from the angels to humanity.

The setting forth of non-human ideas and points of view, from a plane of super-physical consciousness, in human and material language, is a rather baffling enterprise. Hodson has succeeded rather better than one has a right to expect, but even so, though there are many illuminating and helpful passages, the general effect is somewhat diffuse and intangible, as seems almost inevitable, under the circumstances.

For those who are already aware of the existence of angels and other non-human beings, the book will prove very interesting and valuable. For beginners in occult studies it cannot be recommended, as it is so transcendental as to leave a feeling of unreality and lack of substantialness.

HENDERSON & GILLESPIE: PSYCHIATRY

A TEXT-BOOK OF PSYCHIATRY FOR STUDENTS AND PRACTITIONERS. By D. K. Henderson, M.D. (Edin.), F.R.C.P.S. (Glas.), Physician-Superintendent, The Glasgow Royal Mental Hospital; etc.; and R. D. Gillespie, M.D. (Glas.), D.P.M. (Lond.), Physician for Psychological Medicine, Guy's Hospital, London; etc. London, New York, etc.: Humphrey Milford, Oxford University Press. 1927. Price \$5.50.

As we come to realize that mental disease differs in no essential from physical disease, it becomes apparent that mental hygiene and psychic prophylaxis are extremely important; and as most mental

cases are first seen by a general practitioner, or someone other than a psychiatrist, it behooves all physicians to acquaint themselves with the symptoms of mental maladies, in order that they may detect them early and institute proper treatment or refer them to specialists.

This volume is intended to put a working knowledge of psychiatry within easy reach of the general practitioner, and accomplishes its purpose.

The method of making a mental examination, which is of fundamental importance in these cases, is given in sufficient detail to enable any intelligent and interested physician to make such a study of the patient as will point to the proper handling of the case.

The classification used is as simple as is consistent with clarity, and little space is wasted on theoretic or academic discussions.

A considerable part of the book is devoted to complete and detailed case histories, which give the reader a vivid picture of the patient being studied and actually, to a notable extent, take the place of direct clinical study.

Every physician should have at least one good, modern book on psychiatry, and should study it diligently. This work is up to date, readably written, easily understood and highly practical, and will be a valuable addition to any medical library.

SLUDER: NASAL NEUROLOGY

NASAL NEUROLOGY, HEADACHES AND EYE DISORDERS. By Greenfield Sluder, M.D., F.A.C.S., Clinical Professor and Director of the Department of Oto-Laryngology, Washington University School of Medicine, St. Louis. With 167 illustrations, including 2 Color Plates. St. Louis: The C. V. Mosby Company. 1927. Price \$11.50.

The intimate sensory connections and intercommunications between the eye, ear, nose and throat give rise to problems that, although often manifested, are only dimly understood by the average specialist and less so by the average practitioner. But there is no doubt that these nervous connections give rise to clinical symptoms that are highly important.

In the present volume, Dr. Sluder deals with the neurologic aspects of rhinology and discusses a mass of information on this aspect which should be of much interest to neurologists, internists and ophthalmologists.

An important point which Dr. Sluder stresses is that the involuntary nervous system is superficial in the nose, and nowhere else in the body.

It is only within comparatively recent years that the importance of the nervous apparatus connected with the ear, in relation to posture and orientation, has been brought to light by intensive study. It is quite probable that a study of the nervous apparatus of the nose may, in the future, throw light on phenomena that are now puzzling such, for instance, as epilepsy.

As Dr. Sluder points out, though it is not quite within the province of the ordinary rhinologist to enter into an intensive study of nasal and associated neurology, yet it is well within the province of every practitioner of medicine to study pathologic conditions that come within his practice and to observe and report any phenomenon that seems to him out of the ordinary. It is mainly by such clinical observations that science advances.

ASHHURST: SURGERY

SURGERY, ITS PRINCIPLES AND PRACTICE. For Students and Practitioners. By Astley Paston Cooper Ashhurst, A.B., M.D., F.A.C.S., Professor of Clinical Surgery in the University of Pennsylvania; Surgeon to the Episcopal Hospital and to the Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases; etc. Third Edition, Thoroughly Revised. With 15 Colored Plates and 1046 Illustrations in the Text, Mostly Original. Philadelphia: Lea & Febiger. 1927. Price \$10.00.

This (third) edition of Ashhurst's surgery has been thoroughly revised. Many chapters have been rewritten or newly introduced, but by careful editing the actual number of pages in the new edition is less than in the previous one.

The new or revised matter includes: alkalosis; tularemia; granuloma inguinale; paravertebral and synergistic anesthesia; fractures; surgery of pulmonary tuberculosis and bronchiectasis; anomalies of rotation and fixation of the intestines; carcinoma of the rectum, etc., etc.

There are many new illustrations.

The book maintains its high standard as a concise and ready text of the latest principles of American surgery, and is recommended as such.

GILBERT: DESERT VERSES

SINGING SANDS. By Jesse V. Gilbert. Boston: The Christopher Publishing House. 1928. Price \$2.00.

Only those who have lived with it know the potent spell which the great desert region of the West and Southwest casts over one.

Dr. Gilbert, who is a practicing physician in Maricopa, Calif., knows the desert and has caught much of its charm and mystery in these "hand-forged verses," as he calls them.

ROYSTER: APPENDICITIS

APPENDICITIS. By Hubert Ashley Royster, A.B., M.D., Surgeon to Rex Hospital, Surgeon-in-Chief. St. Agnes Hospital, Raleigh, N. C.; etc. A Surgical Monograph, under the editorial supervision of Dean Lewis, A.B., M.D., Eugene H. Pool, A.B., M.D. and Arthur W. Elting, A.B., M.D. New York and London: D. Appleton and Company. 1927. Price \$7.00.

Although several textbooks and innumerable journal articles have been written

upon the subject of appendicitis, the author points out that within recent years no treatise has appeared.

Within this period important changes have occurred in our conceptions of the etiology of appendicitis; besides, there are newer ideas of diagnosis and treatment. The periodical literature dealing with these matters lacks correlation and the present book has been written to supply coherency and sequence in considering the whole subject, from the anatomy of the appendix to the surgical treatment of its diseases. The author considers appendicitis entirely as a surgical disease.

While the book is mainly a compendium of the best prevalent thought on the subject of appendicitis, the author has interspersed his own personal opinions and has suggested procedures as necessary.

Considering the universality of appendicitis and its manifold manifestations, this book is recommended to practitioners as it gives clear descriptions and excellent illustrations of every phase connected with the disease, and especially of its surgical treatment.

SANSUM: DIET

THE NORMAL DIET. A Simple Statement of the Fundamental Principles of Diet for the Mutual Use of Physicians and Patients. By W. D. Sansum, M.S., M.D., F.A.C.P., Director of the Potter Metabolic Clinic, Department of Metabolism, Santa Barbara Cottage Hospital, California. Second Edition. St. Louis: The C. V. Mosby Company. 1927. Price \$1.00.

The author in this little volume gives a number of menus to cover fundamental normal diet requirements; also suitable diets in cases of the acid-ash and acetone-ash types of acidosis.

The protein, mineral and other requirements of the body are discussed, as well as the principles of food balances.

The book is intended to prevent the minor and serious ailments due to faulty dieting.

GLANDULAR THERAPY

GLANDULAR THERAPY. A Series of Articles Prepared Under the Auspices of the Council on Pharmacy and Chemistry of the American Medical Association. Chicago, 535 North Dearborn Street: American Medical Association. 1927. Price \$1.00.

This small volume is composed of a series of short articles, prepared under the auspices of the Council on Pharmacy and Chemistry of the American Medical Association.

The book is valuable to the general practitioner, as it boils down the voluminous and often misleading literature on the subject of glandular therapy and gives the bald facts, so far as they are known from actual observation and verification. At the same time it is well to know just what can be expected from glandular therapy, and

perusal of the book will show that this is greater than is usually surmised.

A worth-while addition to any physician's library.

HARE: PRACTICAL THERAPEUTICS

A TEXTBOOK OF PRACTICAL THERAPEUTICS. *With Especial Reference to the Application of Remedial Measures to Disease and Their Employment Upon a Rational Basis.* By Hobart Amory Hare, B.Sc., M.D., LL.D., Professor of Therapeutics, Materia Medica, and Diagnosis in the Jefferson Medical College of Philadelphia, etc. Twentieth Edition, Enlarged, Thoroughly Revised and Largely Rewritten. Illustrated with 158 Engravings and 8 Plates. Philadelphia: Lea & Febiger. 1927. Price \$7.50.

A book which has reached its twentieth edition and is so well known and popular as Hare's Therapeutics requires very few words from a reviewer. Nevertheless, it might not be amiss to remark that, as Part IV only deals with therapeutics, it is scarcely quite correct to label the entire book by that name. Also considering the great advance in light-heat and electrotherapy, in a large number of diseases, somewhat more space might have been given to these methods in the section on therapeutics.

The book remains a monument of information concerning the accepted rational methods of treatment and the value of drugs. The present edition has been thoroughly revised and the general practitioner may fairly regard it as a vade mecum in his practice.

The author thinks that the tendency at the present time is to limit the number of drugs to those whose value has been well proved. We rather fancy that the present day has placed at the physician's disposal a larger number than ever of useful and well tried drugs whose physiologic action is known and that thus he has a much greater variety and certainty of action than formerly.

McKENZIE: INFANCY OF MEDICINE

THE INFANCY OF MEDICINE. *An Enquiry into the Influence of Folk-Lore upon the Evolution of Scientific Medicine.* By Dan McKenzie, M.D. (Glasg.), F.R.C.S.E., F.S.A. London, New York, etc.: The Macmillan Co. 1927. Price 15/- net.

While not a history of the evolution of medicine or a study of magic or superstitious practices connected with sickness among primitive peoples, yet in this book Dr. McKenzie delves into practices of all kinds among different races, at all epochs, which resulted in certain traditional methods of dealing with diseases.

There is no attempt at chronological medical evolution; in some highly civilized countries, even at the present time, there are practices in vogue among the people in dealing with pathologic and abnormal conditions which are clearly the descen-

dants of ancient customs. Modern medical methods, too, are often only refinements of some of these old customs.

While most of the primitive medical craft practices were undoubtedly the result of magic and superstition, yet others sprang from what might be called common sense and it is in this way that Dr. McKenzie classifies his book as the "Infancy of Medicine."

The book should prove of much interest to those who pursue the study of primitive medical lore, although most of the practices alluded to are very well known to those whose knowledge of the subject is even superficial.

SCHUMM: ANALYSIS OF NATURAL ORGANIC COLORING MATTERS

DIE SPEKTROCHEMISCHE ANALYSE NATÜRLICHER ORGANISCHER FARBSTOFFE. *Mit besonderer Berücksichtigung des Blutfarbstoffs, seiner medizinisch wichtigsten Abkömmlinge und einiger verwandter Pflanzenfarbstoffe. Ausgewählte Methoden und neuere Forschungsergebnisse.* Von Professor Otto Schumm. Zugleich zweite Auflage der Klinischen Spektroskopie. Jena, Germany: Verlag von Gustav Fischer. 1927. Price Mk. 25.

This book is a recognition of the growing importance in medicine of physico-chemical methods, such as the measurement of optical properties. In this book, the author discusses specifically the use of spectrometric analyses applied to blood pigment, its medicinally important derivatives, and certain related plant dyes. An excellent discussion is given of the theory and practice of spectrophotometry, well illustrated by photographs. An apparently exhaustive bibliography and a good index are included. The book should be of material assistance to all those who are interested in the measurement of optical properties.

E. H. V.

SAHLI: CLINICAL DIAGNOSIS

LEHRBUCH DER KLINISCHEN UNTERSUCHUNGSMETHODEN. *Für Studierende und praktische Ärzte.* Von Prof. Dr. H. Sahli, Direktor der medizinischen Universitätsklinik in Bern. Siebente, umgearbeitete und ergänzte Auflage. 1. Band, 1. Hälfte. Mit teilweise farbigen Textabbildungen 1 bis 298. Leipzig und Wien: Franz Deuticke. 1928. Price 26 Mk.

Professor Sahli's textbook on clinical diagnostic methods is well known and has been translated into English and other languages.

This is the first part of Vol. 1 of the seventh German edition, and the author considers that it has the character of a completely new treatment of the whole subject, viewed from present-day standpoints. Much that is now considered obsolete has been deleted and much that is new added in the present book. The additional new matter includes especially the newer

methods of investigating and diagnosing disorders of the heart and of the circulatory system.

The diagnosis of gastric and intestinal diseases also forms important chapters in this part of the work which, when completed, promises to be a standard and monumental reference book on clinical diagnosis.

SCHLESINGER: ROENTGEN DIAGNOSIS

EMMO SCHLESINGERS ROENTGENDIAGNOSTIC DER MAGEN- UND DARMKRANKHEITEN MIT EINSCHLUSS DER ERKRANKUNGEN DER SPEISERÖHRE UND GALLENBLASE. (*Emmo Schlesinger's Roentgen Diagnosis of Diseases of the Stomach and Intestines, Including Diseases of the Esophagus and Gall Bladder.*) Third, Revised and Enlarged Edition. Edited by Dr. Ernest Rachwalsky, Specialist in Gastro-Intestinal Diseases in Berlin. Berlin N 24, Friedrichstrasse 105 B: Urban und Schwarzenberg. 1927. Price 24 Mk.

Emmo Schlesinger, who had written the first two editions of the present volume, died in 1925. The third, enlarged edition is his own work, in the main, but his assistant, Rachwalsky, has edited it and has added a brief but very readable chapter on gall-bladder diagnostics, with particular reference to cholecystography.

This is a diagnostic study based on all findings, clinical as well as roentgenologic, and, therefore, is of great value to all who are interested in the diagnosis of gastro-intestinal diseases, not only roentgenologists but principally surgeons and internists, for it is the clinician who often lacks the knowledge to interpret the films produced by the various methods, and must depend on the roentgenologist for a diagnostic verdict, which, according to our personal experience, often enough has been misleading.

The present volume does not pretend to be able to make an expert out of even the most careful reader, but the material presented is so instructive, from the standpoint of verification by postmortems or by operation, that a perusal must enable everyone to become, to a great extent, independent in evaluating roentgenoscopic findings and certainly to facilitate intelligent cooperation with the roentgenologist.

All those who can read the German language at all will find the present volume to be so fascinating that they will be glad to go back to it again and again until the entire subject has been absorbed.

We note that the editor, Rachwalsky, prefers the oral method of administering tetraiodophenolphthalein to the intravenous or intestinal injections, and rightly so, for the shock due to even the most carefully administered intravenous injection represents a real risk in some cases.

An enormous bibliography and a good index will also be appreciated by specialist-interested readers.

G. M. B.

NOYES: PSYCHIATRY

A TEXTBOOK OF PSYCHIATRY. *For Students and Graduates in Schools of Nursing.* By Arthur P. Noyes, First Assistant Physician, Saint Elizabeth's Hospital. New York: The Macmillan Company. 1927. Price \$2.60.

This concise outline of psychiatry is the embodiment of the experience gained from several years of lecturing on the subject to students of St. Elizabeth's Hospital Training School for Nurses, Washington, D. C., and in other nursing institutions.

While the main object of the book is directed to the care and technic of treatment of the psychotic, there are many matters which will be of interest to the general practitioner, especially those dealing with the differentiation of symptoms in the different psychoses.

CASTILE SOAP

A MONOGRAPH COVERING THE ORIGIN, HISTORY AND SIGNIFICANCE OF THE TERM CASTILE SOAP. *Together with a Discussion of the Properties, Uses, Reputation, Adulteration, and Imitation of the Product; Based upon over 900 Extracts from the Literature of 400 Years.* By R. W. Mitchell, Ph.D., Chemist. Boston: Lockwood Brackett Co. 1927.

BABY'S HEALTH DIARY

PENDULUM. *Baby's Health Day by Day.* Chicago, 17 N. Wabash Ave.: The Professional Press, Inc. 1927. Price \$1.50.

An attractively gotten up book for keeping daily records and weekly summaries of all matters pertaining to the health of an infant. Spaces are provided for recording feedings, bathing, hours out of doors, sleep, bowel movements.

Useful for mothers and, if properly kept, a great help to any physician who treats children.

BLUMENTHAL: SOLUTION AND DOSAGE

PRINCIPLES OF SOLUTION AND DOSAGE. *A Textbook for Nurses.* By Ann Blumenthal, R.N., Educational Director Training School—Pacific Hospital, Los Angeles; Formerly Supervisor and Instructor, Michael Reese Hospital, Chicago; etc. New York: The Macmillan Company. 1927. Price \$1.60.

A little book, prepared for the instruction of nurses on the subject of solutions, based on fundamental principles rather than on set rules.

Medical News



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DR. WILLIAM T. FITZSIMMONS (The First American Officer Killed in France)

It should be of interest to all physicians to remember that the first officer of the American Expeditionary Forces to be killed in France was a medical officer, Lieut. William Thomas Fitzsimmons, who met death at Dannes-Camiers, on September 4, 1917.

The Country's debt to this young hero is recognized by the fact that the Army's great tuberculosis hospital, at Denver, Colorado, has been named in his honor the Fitzsimmons General Hospital.

DR. J. SOLIS-COHEN PASSES

The nestor of American laryngologists, Dr. J. Solis-Cohen, passed to his rest at his home in Philadelphia, on December 22, 1927, in his 89th year.

Dr. Solis-Cohen was emeritus professor of rhino-laryngology at Jefferson Medical College. He served with distinction, in both the Army and Navy, during the Civil War, and received several honorary degrees.

Throughout his long and active life, he was a valuable member of his profession and of his community.

SPA DIRECTORS WELCOMED

The directors and officials of the German spas, visiting in America, were entertained recently at the editorial offices of *Medical Life*, in New York City, on which occasion, Dr. Victor Robinson, the editor, delivered an address of welcome which painted the equipment and methods of these famous resorts in glowing and poetic terms.

RABIES

In Chicago, rabies is assuming almost epidemic proportions. In 1927 there were 7 deaths from this disease—more than occurred in the 12 years, 1915 to 1926. The Department of Health has provided treatment for 108 indigent persons bitten by rabid dogs, besides those who have paid for private treatment.

It might be a good idea to look up the whole subject, to be prepared for cases which may occur in other communities.

HOSPITAL CLINICAL CONGRESS

The 13th annual convention of the Catholic Hospital Association of the United States and Canada and the second annual Hospital Clinical Congress of North America will be held in the Cincinnati music hall, Cincinnati, Ohio, June 18th to 22nd, inclusive, 1928. The fourth annual convention of the International Guild of Nurses will be held at the same time, in the same building, at night meetings.

This Convention and Congress will comprise general scientific meetings, special clinics or demonstrations of hospital departments, and three hundred special commercial and educational exhibits. Outstanding authorities in medicine, surgery, pathology, nursing, dietetics and hospital administration, architecture and engineering will lecture and demonstrate in specially planned clinics representing the various departments of the modern hospital. Further

information may be obtained from John R. Hughes, M.D., Marquette University, Milwaukee, Wisconsin.



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NEW JAPANESE BABY CARRIER

In Japan, few except the very wealthy can afford to hire someone to look after the babies while the mothers go about their errands abroad, so the mothers or older sisters carry them on their backs, papoose fashion, as shown at the left.

A Japanese physician, Dr. Namba (shown at the right) has realized that the old method leads to posture defects and undue fatigue and has devised a light and practical wicker cradle (in the center), which appears to be much more hygienic.

PHYSICIAN URGENTLY NEEDED IN MICHIGAN

The village of Edwardsburg, Michigan, is now without a medical attendant, and one is urgently needed. The nearest available doctor is 9 miles away. Suitable housing arrangements can be made for a bachelor or for a man with a family. More detailed information can be obtained from Mr. F. C. Keppler, P. O. Box 68, Edwardsburg, Mich.

MEDICAL JOURNAL IN HEBREW

"The Hebrew Physician", (HaRofoh Ho-Ivree), the only medical journal published outside of Palestine which is printed in Hebrew, has just made its initial appearance.

This Journal is under the editorship of Dr. Moses Einhorn and Dr. A. Goldenstein.

It contains articles on general medical subjects and has a special section devoted to new Hebrew medical terminology. All physicians who are interested in this journal are requested to communicate with the editors, addressing them c/o "The Hebrew Physician", 286 West 86th St., New York City.

PRESCRIPTIONS FOR DRUG ADDICTS

The Circuit Court of Appeals for the Ninth Federal Circuit has recently held that the only legal conditions under which a physician can prescribe or dispense narcotic drugs, under the Harrison Act, is to bona fide patients, in the course of his practice, and for the actual treatment of disease only.

The Court held, further, that if a physician issues a prescription for narcotic drugs, not in the course of professional practice and not for the direct treatment of disease, with the intent that the recipient shall obtain such narcotics from a druggist, it makes no difference whether the quantity prescribed is large or small, or whether or not the druggist has knowledge of the circumstances; the physician has violated the law.

The constitutionality of this law has been affirmed in a number of court decisions.

CAUSES OF DEATH

The Department of Commerce, Washington, D. C., releases the following, December 30, 1927, as the major causes of death in 1926:

Disease of the heart.....	209,370
Pneumonia	107,797
Nephritis	103,332
Cancer	99,833
Tuberculosis	91,568
Cerebral Hemorrhage.....	90,832

SPANISH PHARMACOPOEIA

The Spanish edition of the U.S.P.X. has recently been published. The translation was made by a committee from the University of Havana.

The U. S. Pharmacopoeia has been adopted as the official standard in Cuba and is widely used in Central and South America.

Send for This Literature

To assist doctors in obtaining current literature published by manufacturers of equipment, pharmaceuticals, physicians' supplies, foods, etc., CLINICAL MEDICINE AND SURGERY, North Chicago, Ill., will gladly forward requests for such catalogues, booklets, reprints, etc., as are listed from month to month in this department. Some of the material now available in printed form is shown below, each piece being given a key number. For convenience in ordering, our

readers may use these numbers and simply send requests to this magazine. Our aim is to recommend only current literature which meets the standards of this paper as to reliability and adaptability for physicians' use.

Both the literature listed below and the service are free. In addition to this, we will gladly furnish such other information as you may desire regarding additional equipment or medical supplies. Make use of this department.

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|------|--|------|--|
| C- 1 | Helping the Cell to Help Itself. 32-page booklet by The Alkalol Co. | C-15 | Atophan—Rheumatism, Gout, Neuritis, Sciatica, Neuralgia. Schering & Glatz, Inc. |
| C- 2 | Your Prestige and Profit. 8-page booklet. The Carroll Dunham Smith Pharmacal Co. | C-17 | An Index of Treatment. Burnham Soluble Iodine Co. |
| C- 3 | Storm Binder and Abdominal Supporter. 4-page folder by Dr. Katherine L. Storm. | C-19 | Hyperacid Conditions, Their Relief and Correction, Alka-Zane. Wm. R. Warner & Company. |
| C- 4 | Pluto Water. Its Medicinal Values. 16-page booklet. French Lick Springs Hotel Co. | C-20 | A Survey of Focal Infection. Fellows Medical Mfg. Co. |
| C- 5 | Ethical Medicinal Specialties. 8-page booklet. A. H. Robins Co. | C-24 | German Resorts. German Health Resort. |
| C- 6 | The Journal of Organotherapy. 95-page booklet published monthly. G. W. Carnrick Company. | C-25 | Program Medical Lectures in Bad Kissingen. German Health Resorts. |
| C- 7 | The Cure of Cystitis, Pyelitis and other Inflammatory Conditions of the Urinary Tract. Chicago Pharmacal Co. | C-26 | NEW SUGGESTIONS: X-Ray Technic with Petrolagar as Suspending Agent for the Opaque Meal, with reprint from the <i>Medical Journal and Record</i> for May 4, 1927, entitled "A Suggested Modification in the Technic of X-Ray Examinations of the Gastrointestinal Tract" by Dr. J. F. Montague, F.A.C.S. Deshell Laboratories, Inc. |
| C- 8 | The Dangers of Curettage. Huston Bros. Company. | C-28 | T. O. S. Tilden Company. |
| C- 9 | Hang This Up—It Tells How to Make Percentage Solutions. Sharp and Dohme. | C-29 | The Blood Picture. The Wilson Laboratories. |
| C-10 | Twentieth Century Health Builders. Burdick Corporation. | C-30 | Dys-Amen-Caps. Tilden Company. |
| C-12 | The Bloodless Phlebotomist, Vol. VI, No. III. The Denver Chem. Mfg. Co. | C-35 | Assisting Nature to Assist Itself. Reed & Carnrick. |
| C-13 | Endocrines and Hormones. Huston Brothers. | C-37 | pH 7.4, Alka-Zane. Wm. R. Warner & Co., Ltd. |
| C-14 | The New Ultra-Violet Therapy. McIntosh Electrical Corporation. | | |

- C-38 Hycol. The Certified Disinfectant. Merck & Co.
- C-39 A Convincing Solution of an Old Problem, Isacen. The Hoffmann-La Roche Chemical Works.
- C-40 Truth Spreads by Testimony, Isacen. The Hoffmann-La Roche Chemical Works.
- C-41 The Specific Treatment of Pneumonia with Numoquin Base. Merck & Company.
- C-42 Detoxification in the Treatment of Infection. The Wm. S. Merrell Company.
- C-43 "Humanize" Cow's Milk. The Wm. S. Merrell Company.
- C-45 Vera-Perles of Sandalwood Comp. Paul Plessner Co.
- C-46 Bedtime Nourishment. Mellin's Food Co.
- C-47 Campho-Phenique in Major and Minor Surgery. Campho-Phenique Co.
- C-48 A New and Successful Synthetic Remedy—Cardiazol. E. Bilhuber, Inc.
- C-49 The Calcreose Detail Man. Maltbie Chemical Co.
- C-50 Outwitting Constipation. Standard Oil Co.
- C-51 The Ideal Anti-Gonorrheic. Reidel & Co., Inc.
- C-52 Cre-So-Mul. First Texas Chemical Mfg. Co.
- C-53 The Burdick Zoalite, Standard Infra-red Generator. The Burdick Corporation.
- C-56 Regaining Health. How Science Can Guide You! The Fleischmann Co.
- C-58 The Pharmacology of Cod Liver Oil. Smith, Kline & French Co.
- C-62 Medical Pocket Quarterly—March. Reed & Carnrick.
- C-65 Siomine (Methenamine Tetraiodide) C' H³ N⁴ I⁴ 78.5% Iodine. Pitman-Moore Company.
- C-66 Kalzan (Calcium-Sodium Lactate Tablets). The Wulff Company.
- C-67 The Electro-Pathology of Local Inflammation. The Dionol Company.
- C-70 Yeast Therapy. The Fleischmann Company.
- C-72 Engineering the Plans for the X-Ray Laboratory. Victor X-Ray Corporation.
- C-74 Making the Action of Digitalis More Certain. The Hoffmann-La Roche Chemical Works, Inc.
- C-75 On the Subject of Burns and other Painful Lesions. The Dionol Co.
- C-76 Iodized Oil in X-Ray Diagnosis. Merck & Co., Inc.
- C-77 The Coolidge X-Ray Tube. Victor X-Ray Corporation.
- C-78 Nourishment for Adults and Children In Health or Illness. Mellin's Food Co.
- C-81 Gall Bladder disease, Battle & Co.
- C-82 Service-Suggestions, March-April, 1928. Victor X-Ray Corp.
- C-83 The Quartz Lamp, February 15. Hanovia Chem. & Mfg. Co.
- C-84 Latent Constipation—A Diagnostic Problem, Agarol. Wm. R. Warner & Co.
- C-85 Ultraviolet for Health. Hanovia Chem. & Mfg. Co.
- C-86 Intravenous Therapy, A Modern Therapeutic Necessity. Loeser Laboratory.
- C-87 Journal of Intravenous Therapy. Loeser Laboratory.
- C-88 Anemia. Harrower Laboratory.
- C-89 Simple Goitre. Harrower Laboratory.
- C-90 Applicators and Accessories for Victor Quartz Lamps. Victor X-Ray Corporation.
- C-91 Infection and Inflammation. The Dionol Company.
- C-92 The Mystery of Sleep. The Hoffmann-La Roche Chemical Works.
- C-93 Brite-sun Therapeutic Booklet. Brite-sun, Inc.
- C-94 A Compendium of Glandular Therapy. Colwell Pharmacal Corporation.
- C-95 Everything for the Sick—Lindsay Laboratories.